

IPA Region 5 Records Ctr.



147744

Evergreen Manor  
Groundwater Contamination  
Screening Site  
Inspection Report

C. 2  
7/1/12

9-29-92

L2010400015--Winnebago County  
Evergreen Manor GW Contamination  
ILD984836734  
Superfund/HRS



# **CERCLA**

## Screening Site Inspection Report



**Illinois Environmental  
Protection Agency**  
P.O. Box 19276  
Springfield, IL 62794-9276

Site Priority Status Recommendation

It is recommended that the Evergreen Manor Groundwater Contamination area (ILD 984836734) located in Roscoe, Illinois, Winnebago County, be assigned a high priority for a Listing Site Inspection. This recommendation is a result of the Screening Site Inspection and the groundwater samples collected from residential wells by Illinois Department of Public Health (IDPH) between December 1990 and December 1991.

According to the residential well results from the IDPH, at least 130 homes in the Evergreen Manor Subdivision, Hononegah Heights Subdivision, Olde Farm Subdivision and possibly the Tresemer Subdivision are contaminated with volatile organic compounds. The aquifer of concern is the shallow sands and gravels and the shallow sandstone aquifer. The sands and gravels extend from the surface to 250 feet deep. There is no confining layer between the sand and gravel aquifer and the sandstone aquifer. Additional private wells are located in the area and fourteen (14) public wells exist within four miles of the site.

The surface water pathway may be affected by groundwater discharge into the Rock River. The Rock River is not used as a drinking water source, but is a highly valued aquatic resource and a good fishery.

The soil exposure pathway and the air pathway are not of concern at this time since a source of the groundwater contamination has not been found.

## TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1. INTRODUCTION . . . . .	1
2. SITE BACKGROUND . . . . .	3
2.1 INTRODUCTION . . . . .	3
2.2 SITE DESCRIPTION . . . . .	3
2.3 SITE HISTORY . . . . .	9
2.4 APPLICABILITY OF OTHER STATUTES . . . . .	10
3. SCREENING SITE INSPECTION PROCEDURES AND FIELD OBSERVATIONS .	29
3.1 INTRODUCTION . . . . .	29
3.2 RECONNAISSANCE INSPECTION . . . . .	29
3.3 SOIL GAS SAMPLING . . . . .	30
3.4 GROUNDWATER SAMPLING . . . . .	30
3.5 ANALYTICAL RESULTS . . . . .	35
4. IDENTIFICATION OF SOURCES . . . . .	37
4.1 INTRODUCTION . . . . .	37
4.2 GROUNDWATER PLUME . . . . .	37
4.2.1 Description . . . . .	37
4.2.2 Waste Characteristics . . . . .	37
4.2.3 Potentially Affected Pathways . . . . .	38
5. MIGRATION PATHWAYS . . . . .	39
5.1 INTRODUCTION . . . . .	39
5.2 GROUNDWATER PATHWAY . . . . .	39
5.3 SURFACE WATER PATHWAY . . . . .	40
5.4 AIR PATHWAY . . . . .	41
5.5 SOIL EXPOSURE PATHWAY . . . . .	41
6. BIBLIOGRAPHY . . . . .	43



## LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
2-1 STATE OF ILLINOIS MAP . . . . .	4
2-2 LOCAL AREA MAP . . . . .	5
2-3 LOCATIONS OF NEARBY INDUSTRIES AND BUSINESSES . .	8
2-4 TRICHLOROETHENE CONCENTRATIONS IN WELLS . . . . .	20
2-5 TETRACHLOROETHENE CONCENTRATIONS IN WELLS . . . . .	21
2-6 1,1-DICHLOROETHENE CONCENTRATIONS IN WELLS . . . .	22
2-7 1,1,1-TRICHLOROETHANE CONCENTRATIONS IN WELLS . .	23
2-8 CIS-1,2-DICHLOROETHENE CONCENTRATIONS IN WELLS .	24
2-9 1,1-DICHLOROETHANE CONCENTRATIONS IN WELLS . . . .	25
2-10 1,1,2-TRICHLOROETHANE CONCENTRATIONS IN WELLS . .	26
2-11 TOTAL ORGANIC COMPOUND CONCENTRATIONS IN WELLS .	27
3-1 JUNE 1-4, 1992 SOIL GAS SAMPLING LOCATIONS . . . .	32
3-2 AUGUST 10-13, 1992 SOIL GAS SAMPLING LOCATIONS .	33
3-3 AUGUST 10-13, 1992 GROUNDWATER SAMPLING LOCATIONS	34
D-1 PHOTOGRAPH LOCATION MAP . . . . .	APPENDIX D

LIST OF TABLES

<u>Table</u>		<u>Page</u>
2-1	LOCATION OF NEARBY INDUSTRIES . . . . .	7
2-2	SUMMARY OF IDPH WELL SAMPLE RESULTS . . . . .	11
5-1	GROUNDWATER TARGET POPULATION . . . . .	40

## APPENDICES

- A SITE 4-MILE RADIUS MAP
- B 15-MILE SURFACE WATER MAP
- C U.S. EPA FORM 2070-13
- D SCREENING SITE INSPECTION PHOTOGRAPHS
- E JUNE 1-4, 1992 SOIL GAS SURVEY REPORT
- F AUGUST 10-13, 1992 SOIL GAS SURVEY REPORT
- G WELL LOGS

## SECTION 1

### INTRODUCTION

On September 24, 1991 the Illinois Environmental Protection Agency's (IEPA) Site Assessment Program was tasked by Region V of the United States Environmental Protection Agency (U.S. EPA) to conduct a Screening Site Inspection (SSI) of the Evergreen Manor Groundwater Contamination in Roscoe, Illinois. The site was initially placed on the Comprehensive Environmental Response, Compensation and Liability Act Information System (CERCLIS) on August 3, 1991. This was the result of information received by the Illinois EPA from the Illinois Department of Public Health (IDPH) and the U.S. EPA concerning groundwater contamination in the area of the Evergreen Manor Subdivision.

The facility received its initial CERCLA evaluation in the form of a Preliminary Assessment (PA) in January, 1992. To initiate the Screening Site Inspection, the IEPA Site Assessment Program prepared and submitted a "Screening Site Inspection Work Plan" for the Evergreen Manor Groundwater Contamination to U.S. EPA Region V offices on April 14, 1992 and July 28, 1992. An on-site reconnaissance visit was conducted on March 18, 1992. The Screening Site Inspection field sampling visit was conducted on June 1-4, 1992 and August 10-13, 1992. During the June field visit, seventeen (17) soil gas samples were collected and twenty-two (22) soil gas samples and four (4) groundwater samples were collected during the August field visit.

The purposes of a CERCLA Screening Site Inspection have been stated by U.S. EPA in a directive outlining Site Assessment Program strategies. The directive states:

All sites will receive a screening SI to 1) collect additional data beyond the PA to enable a more refined preliminary HRS [Hazard Ranking System] score, 2) establish priorities among sites most likely to qualify

for the NPL [National Priority List], and 3) identify the most critical data requirements for the Expanded SI step. A screening SI will not have rigorous data quality objectives (DQOs). Based on the refined preliminary HRS score and other technical judgement factors, the site will then either be designated as NFRAP [no further remedial action planned], or carried forward as an NPL listing candidate. An Expanded SI will not automatically be done on these sites, however. First, they will go through a management evaluation to determine whether they can be addressed by another authority such as RCRA [Resource Conservation and Recovery Act] . . . Sites that are designated NFRAP or deferred to other statutes are not candidates for an Expanded SI.

The Expanded SI will address all the data requirements of the revised HRS using field screening and NPL level DQOs. It may also provide needed data in a format to support remedial investigation work plan development. Only sites that appear to score high enough for listing and that have not been deferred by another authority will receive an Expanded SI (U.S.EPA 1988).

Region V U.S. EPA has also requested that the IEPA identify sites during the Screening Site Inspection that may require removal action to remediate an immediate human health or environmental threat.

## Section 2

### SITE BACKGROUND

#### 2.1 INTRODUCTION

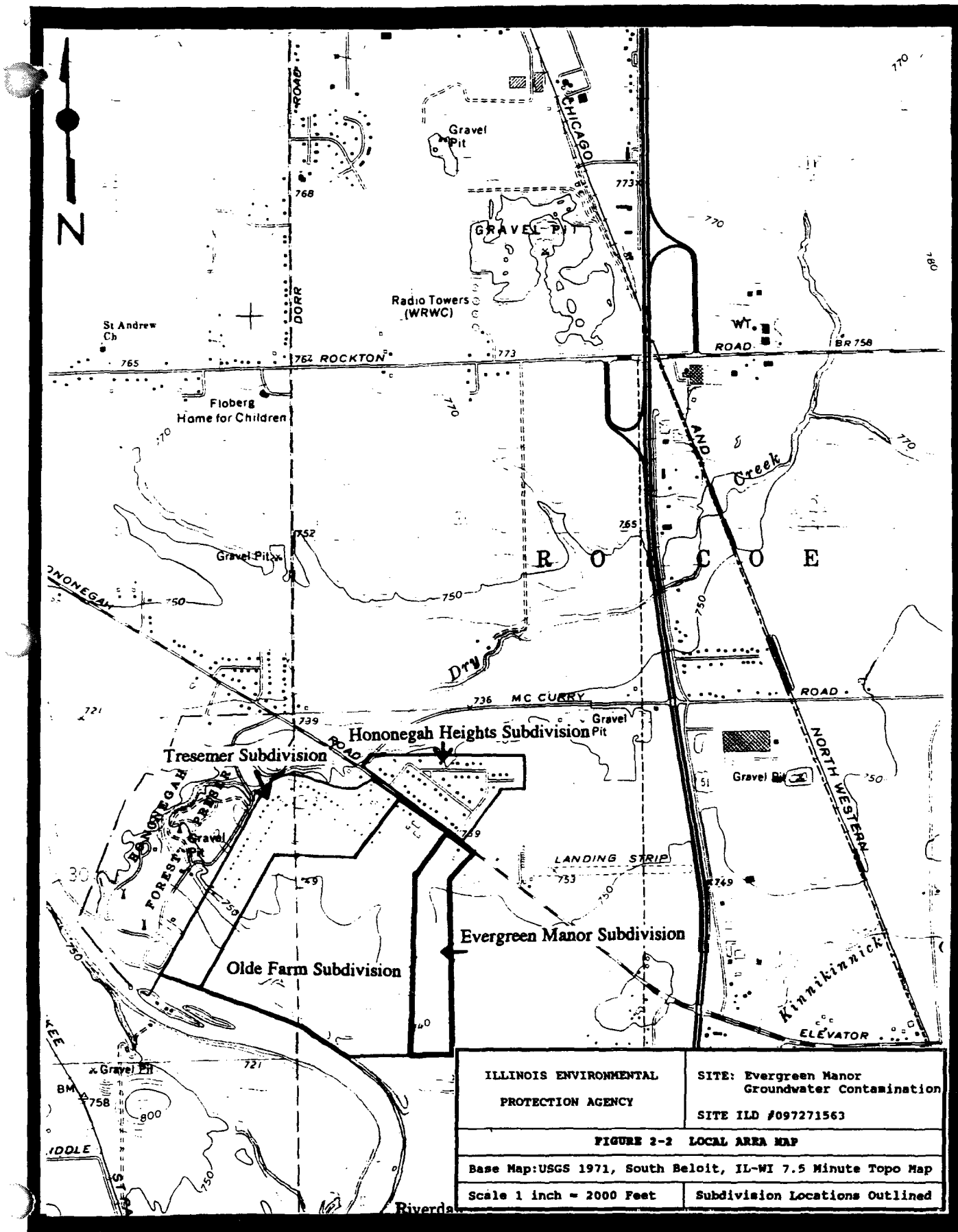
This section includes information obtained over the course of the formal CERCLA Screening Site Inspection investigation and previous IEPA activities involving the Evergreen Manor Groundwater Contamination.

#### 2.2 SITE DESCRIPTION

The Evergreen Manor Groundwater Contamination consists of the residential areas of Evergreen Manor Subdivision, Hononegah Heights Subdivision, Olde Farm Subdivision and possibly the Tresemer Subdivision (see Figure 2-1 and 2-2). These residential subdivisions are located along Hononegah Road approximately 1.5 miles northwest of the Village of Roscoe in Winnebago County, Illinois, in the west 1/2 of Section 29 and the East 1/2 of Section 30, Township 46 North, Range 2 East. Hononegah Heights Subdivision is located north of Hononegah Road while the other three subdivisions are located south of Hononegah Road. A 4-Mile Radius Map of the area surrounding the facility and a 15-mile surface water map may be found in Appendix A and Appendix B of this report, respectively.

The area surrounding the residential subdivisions is a mixture of residential, farm land and industry. Hononegah Forest preserve is to the west, Rock River is to the south, Hononegah Country Estates Subdivision and some agricultural fields is to the east and agricultural land is to the north. A gravel pit and concrete mixing facility are to the northeast about one-half (1/2) mile and further to the northeast about one and one-half (1 1/2) miles are a few scattered industries and a small industrial park.







Previous groundwater investigations at the Warner Brake and Clutch facility, which is approximately 3200 feet east northeast of the northernmost contaminated residential well, indicated groundwater flow in a south southwest direction. A reconnaissance around the Evergreen Manor Groundwater Contamination area revealed the following industries or businesses east, northeast and north of the subdivision (see Table 2-1 for a legend of the nearby industries and Figure 2-3 for the locations of the industries or businesses). The two closest facilities are Roscoe Ready Mix, a concrete mixing plant, and Kelley Sand and Gravel (gravel pit), which are located at the corner of Route 251 and McCurry Road. Well samples were collected from these two industries, with only trichloroethene (TCE) showing up in the Kelley Sand and Gravel well at 3.2 parts per billion (ppb). East of Kelley Sand and Gravel, on the southeast corner of McCurry Road and Route 251, is Warner Electric Brake and Clutch.

Northeast of the Evergreen Manor Groundwater Contamination area, on the frontage road (also referred to as North Second Street) east of 251 and south of Rockton Road, are six industries/businesses. The facilities include Stateline Storage<sup>9</sup> (storage warehouse), Roscoe Sand and Gravel (gravel pit)<sup>8</sup>, State Line Printing Company<sup>8</sup>, Kenny's Cars, Trucks and Equipment (body shop)<sup>8</sup>, Waste Management Company (transfer station for garbage)<sup>8</sup> and State Line Foundries<sup>8</sup>. Two well samples have been collected on North Second Street, one at a private residence south of Stateline Storage and one at the Waste Management facility. The private residential well did not indicate any compounds above detection limits, but the well at the Waste Management facility indicated six organic compounds above detection limits. The compounds found during the last sample date (October 25, 1991) were trichloroethene at 0.6 ppb, tetrachloroethene at 4.0 ppb, 1,1-dichloroethene at 1.9 ppb, 1,1,1-trichloroethane at 40.8 ppb, cis-1,2-dichloroethene at 10.9 ppb and 1,1-dichloroethane at 8.8 ppb.

Table 2-1

## Location of Nearby Industries

<u>Map Index</u>	<u>Business Name</u>
A	Kelley Sand and Gravel
B	Roscoe Ready Mix
C	Warner Brake and Clutch
D	Stateline Storage
E	Roscoe Sand and Gravel
F	Stateline Printing Company
G	Kenny's Cars, Trucks and Equipment
H	Waste Management Transfer Station
I	State Line Foundries
-J	Ecolab
-K	Taylor Design
-L	Inlander-Steindler Paper Company
-M	Regal Beloit Corporation
-N	Midwest Precision Grinding
-O	Makerite Manufacturing
-P	McGuire Brothers Auto Body
-Q	Rockford Steam Boiler Works
-R	Oscar's Auto Battery and Clinic
-S	Dayles Welding
-T	Armour Specialty, Inc.
-U	RD Systems
-V	Area Elevator and DGM
-W	Electro Cam Corporation
-X	Preston 151 (Trucking Firm)
Y	Indicon Midwest
Z	Top Die Casting Company
AA	Ruan (Trucking firm)
AB	Elevator (Grain)
AC	RBR Trucking

Approximately one and one-half (1 1/2) miles north of the subdivisions is a small industrial park and some scattered industries outside of the industrial park area. The industries/businesses south of Rockton Road and east of Route 251 are Ecolab and Taylor Design, Inc. The industrial park north of Rockton Road and east of Route 251 contains the following small businesses and industries: Inlander-Steindler Paper Company, Regal-Beloit Corporation, McGuire Brothers Auto Body and Sand Blasting, Makerite Manufacturing Company, Midwest-Precision Grinding, Rockford Steam Boiler Works, Oscar's Auto and Battery Clinic, Dayles Welding, Armour Specialty, Inc.

(industrial painting), RD Systems, Electro Cam Corporation, Area Elevator, DGM, Preston 151 (trucking firm) and Indicon Midwest. No water samples have been collected by the Illinois Department of Public Health or the U.S. EPA from the wells in this industrial park.

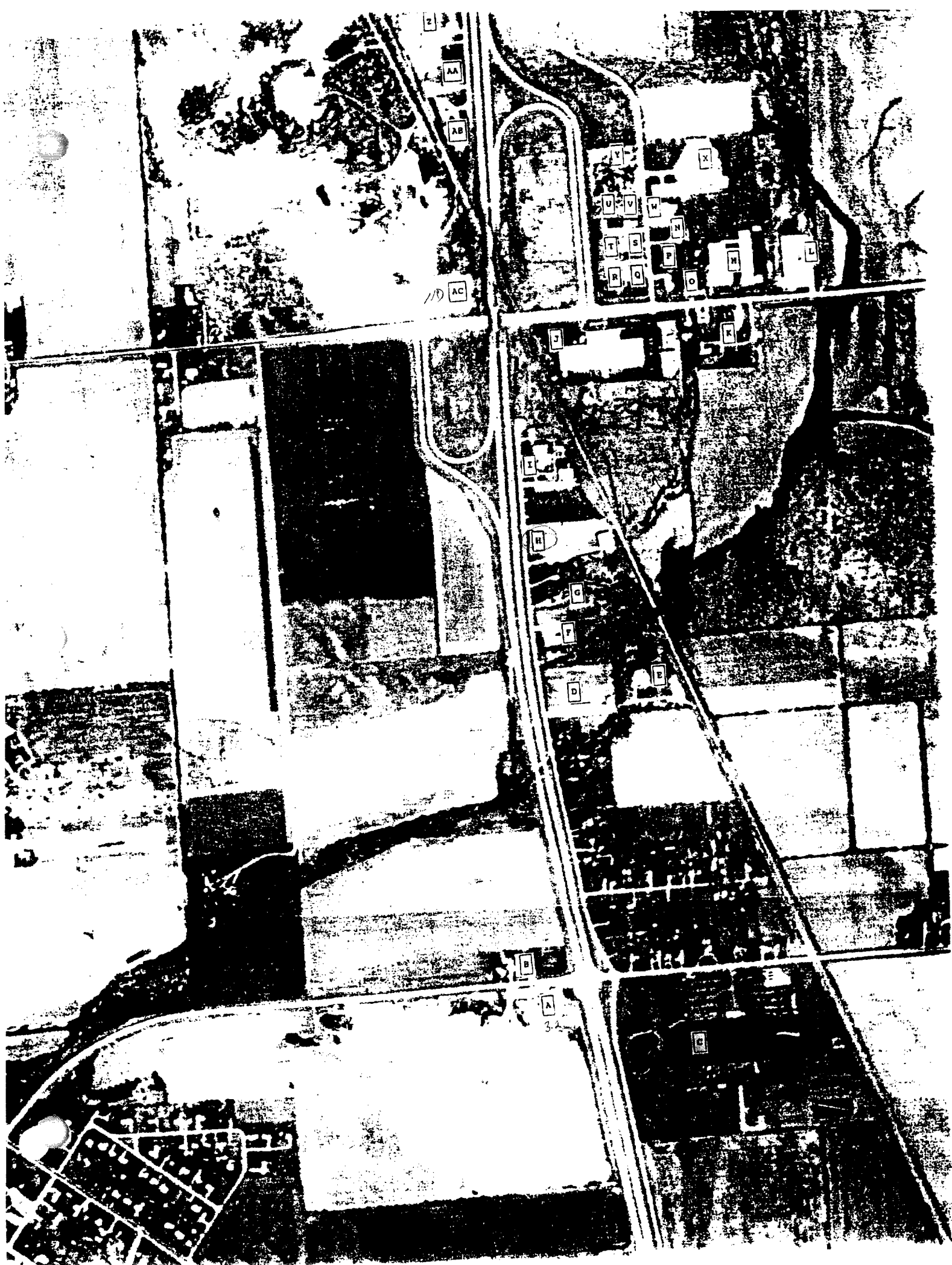
Directly north and slightly east of the subdivisions are four (4) other industries located west of Route 251 and north of Rockton Road. The four (4) facilities include RBR Trucking (trucking firm), Ruan (trucking firm), Top Die Casting Company and an elevator (possibly for grain) next to the railroad tracks. RBR Trucking was the only well sampled in this area with the results from the well indicating no compounds above detection limits.

All other areas surrounding the subdivisions are residential or agricultural in nature. Private residential wells sampled directly north of the Hononegah Heights subdivision did not indicate any concentrations above detection limits.

### 2.3 SITE HISTORY

This section provides a brief history of the Evergreen Manor Subdivision area. Additional, more extensive information may be found in the CERCLA Preliminary Assessment report of January 1992, Illinois Environmental Protection Agency files and Illinois Department of Public Health files.

Information collected from the review of aerial photographs and plat maps indicate that the area was used as farmland prior to development into residential subdivisions. The subdivisions were developed in the following order: Hononegah Heights between 1940 and 1964, Tresemer Subdivision between 1972 and 1974, Olde Farm Subdivision between 1976 and 1979 and Evergreen Manor Subdivision between 1986 and 1988.



However, most of the development, excluding the Evergreen Manor area, occurred in the late 1970's and the early 1980's.

According to Illinois Department of Public Health personnel, contamination in this area was initially discovered in November 1990 when a lending institution required a local homeowner to sample the home's water supply. Analysis of the well water revealed elevated levels of volatile organic compounds. The Illinois Department of Public Health then began sampling private wells in the area to determine the extent of contamination, if any, in the area. The laboratory results of the private well water indicated the presence of the following compounds: 1,1-dichloroethene, cis-1,2-dichloroethene, 1,1-dichloroethane, 1,1,1-trichloroethane, trichloroethene, tetrachloroethene and 1,2,2-trichloroethane (see Table 2-2 for a summary). The sampling of the wells identified a narrow contaminant plume extending from Hononegah Heights Subdivision south-southwest into the Evergreen Manor Subdivision (see Figures 2-4, 2-5, 2-6, 2-7, 2-8, 2-9, 2-10 and 2-11 for concentrations of individual compounds and total organics for homes sampled in the subdivisions).

As of this date, 187 groundwater samples from 166 residences have been collected from the four subdivisions and areas surrounding the subdivisions, with as many as 300 residents within the subdivisions not sampled. Of the 171 residential wells sampled, approximately 130 of the samples indicated at least one volatile compound above detection limits.

#### 2.4 APPLICABILITY OF OTHER STATUTES

This section provides information regarding the applicability of other environmental statutes to the Evergreen Manor Groundwater Contamination area. Based on available information, this site does not appear to fall within the jurisdiction of the Atomic Energy

**EVERGREEN MANOR GROUNDWATER CONTAMINATION  
VOC SAMPLE RESULTS**

\*\*\*\*\*

			Concentrations in Parts Per Billion (ppb)							
Street Number	Sample Date	Name	TCE	PCE	1,1 DCE	1,1,1 TCA	Carbon Tet	Cis1,2 DCE	1,1 DCA	1,1,2 TCA
*****										

**Adele**

4345	02/05/91	Gillis	1.0	--	--	7.8	--	--	--	--
4357	01/10/91	Pate	1.8	--	--	13.2	--	--	--	--
4369	03/19/91	Fosler*	3.0	--	--	15.0	--	--	--	--
4403	01/10/91	Cofoid	4.9	--	2.5	23.1	--	0.4	1.1	--
4427	09/23/91	Palmer	12.5	0.4	2.9	38.7	--	2.6	2.9	--
4428	02/19/91	Hinrichs	26.6	1.0	3.4	37.3	--	4.0	1.7	--
4460	02/05/91	Foirucci	61.3	1.2	3.6	37.4	--	9.7	2.1	0.4
4463	01/10/91	Dahlstrand	59.0	0.9	7.2	46.7	--	9.0	2.8	0.3
4463	04/23/91	Dahlstrand	58.1	1.6	5.6	37.7	--	9.0	3.1	0.5
4463	05/16/91	Dahlstrand	24.0	0.7	1.7	24.0	--	--	1.5	--
4463	09/24/91	Dahlstrand (front)	66.5	1.8	4.4	46.5	--	9.3	1.5	--
4463	09/24/91	Dahlstrand (back)	--	--	--	--	--	--	--	--
4478	01/10/91	Wallace	59.5	0.4	3.2	30.7	--	7.7	1.7	0.3
4481	04/23/91	Gunderson	69.9	0.8	4.8	29.3	--	9.4	2.6	--

**Balsa Lane**

11612	01/10/91		--	--	--	--	--	--	--	--
11708	03/19/91	Shelton*	2.0	--	--	--	--	--	--	--
11731	01/22/91	Sawchuk	--	--	--	--	--	--	--	--
11785	01/22/91	Rhea*	3.0	--	--	1.0	--	--	--	--
11818	01/15/91	Nevens	8.1	--	--	1.7	--	1.3	--	--
11849	01/22/91	Emanie*	8.0	--	--	1.0	--	--	--	--
11867	01/15/91	Gent	7.4	--	--	1.5	--	1.0	--	--
11889	07/09/91	Robertson	6.6	--	--	1.0	--	0.9	--	--

**Bend River**

11504	01/10/91	Fischer	--	--	--	--	--	--	--	--
11537	02/05/91	Radke	--	--	--	0.4	--	--	--	--
11872	01/22/91	Manson	--	--	--	--	--	--	--	--
12136	01/22/91	Dreyer	--	--	--	--	--	--	--	--

\*\*\*\*\*

Concentrations in Parts Per Billion (ppb)

Street Number	Sample Date	Name	TCE	PCE	1,1 DCE	1,1,1 TCA	Carbon Tet	Cis1,2 DCE	1,1 DCA	1,1,2 TCA
---------------	-------------	------	-----	-----	---------	-----------	------------	------------	---------	-----------

\*\*\*\*\*

Blue Spruce

11952	01/15/91	Sneath	37.7	--	5.6	30.4	--	4.0	2.3	--
11952	05/16/91	Sneath	0.7	--	4.4	26.0	--	0.4	10.0	--
11974	12/11/90	Bergstrom	37.7	--	--	24.9	--	--	--	--
11974	12/03/91	Bergstrom	43.2	--	2.8	24.0	--	4.3	1.0	--
11975	12/11/90	Wiersbe	75.4	--	5.3	51.5	--	6.4	4.8	0.4
11975	01/10/90	Wiersbe	50.0	--	3.0	34.8	--	5.0	2.6	--
11975	09/23/91	Wiersbe (raw)	90.9	--	4.5	47.0	--	7.3	2.3	--
11990	12/11/90	Mitchell	37.5	0.3	2.2	25.2	--	2.6	1.4	0.2
12004	12/11/90	Fox	40.2	--	2.1	27.3	--	3.3	1.8	0.2
12017	12/11/90	McIntosh	68.6	--	5.1	39.5	--	6.5	2.7	0.3
12022	01/10/91	Ligus	76.0	--	5.1	57.5	--	6.7	3.4	0.2
12022	09/24/91	Ligus	86.1	--	5.9	43.4	--	7.7	2.1	--
12031	12/11/90	Miller	63.4	--	2.1	33.5	--	5.1	2.5	0.4
12044	12/11/90	Nelson	51.9	--	3.4	30.8	--	4.0	2.0	0.3
12044	07/19/91	Nelson	56.3	--	4.2	28.5	--	5.1	1.8	--
12053	12/11/90	Pagani	49.5	--	2.2	24.6	--	4.1	1.4	0.3
12053	06/04/91	Pagani (raw)	53.6	--	3.6	27.4	--	4.7	1.8	--
12053	06/04/91	Pagani (w.h. filter)	--	--	--	--	--	--	--	--
12062	12/11/90	Canfield	20.0	--	1.3	19.0	2.5	3.5	--	--
12075	12/11/90	Whitley	53.9	--	1.8	26.5	--	4.6	1.8	--
12080	12/11/90	Manel	51.8	--	2.8	28.1	--	4.0	2.0	0.2
12091	12/11/90	Bull	42.9	--	--	14.8	--	4.9	--	--
12102	01/10/91	Shofner	76.0	--	2.9	39.5	--	6.5	1.8	--
12118	12/11/90	Johnson	54.7	--	2.8	28.4	--	5.5	1.8	0.3

Buggywhip

4232	01/15/91	Burch	18.5	--	3.1	22.9	--	3.1	3.1	--
4237	03/19/91	Bader*	13.0	--	2.0	17.0	--	--	--	--
4254	01/10/91	Manvel	12.2	--	1.7	16.1	--	2.7	2.2	--
4272	06/04/91	Donovan	37.7	--	4.7	32.4	--	6.5	3.0	--
4290	07/9/91	Nickels	24.5	--	1.9	12.5	--	4.9	1.3	--
4295	02/05/91	Pettenger	19.0	--	--	11.6	--	4.6	1.1	--

\*\*\*\*\*

Concentrations in Parts Per Billion (ppb)

Street	Number	Sample Date	Name	TCE	PCE	1,1 DCE	1,1,1 TCA	Carbon Tet	Cis1,2 DCE	1,1 DCA	1,1,2 TCA
--------	--------	-------------	------	-----	-----	---------	-----------	------------	------------	---------	-----------

\*\*\*\*\*

Burnside Lane

11898	01/22/91	Handy	--	--	--	--	--	--	--	--	--
-------	----------	-------	----	----	----	----	----	----	----	----	----

Cedarbrook

11152	01/10/91	Loveland	--	--	--	--	--	--	--	--	--
11174	01/10/91	McGee	--	--	--	--	--	--	--	--	--
11187	01/10/91	Quintanilla	--	--	--	--	--	--	--	--	--

DeGroff

5140	07/19/91	Farrell	8.6	--	--	--	--	--	--	--	--
5302	07/19/91	Green	0.7	--	--	--	--	--	--	--	--

Elevator Road

5656	01/15/91	Hope Free Church	--	--	--	--	--	--	--	--	--
------	----------	------------------	----	----	----	----	----	----	----	----	----

Frances Lane

12160	02/19/91	Young	28.6	0.2	0.9	12.5	--	3.5	0.7	--	--
12264	02/05/91	Dryden	43.9	0.3	2.6	17.9	--	5.6	1.3	--	--
12267	01/10/91	Gunderson	8.2	0.2	--	2.0	--	0.4	--	--	--
12301	12/03/91	Barney	18.4	0.6	--	5.7	--	2.3	--	--	--
12305	01/10/91	Waddel	8.4	--	--	2.3	--	0.4	--	--	--
12305	12/03/91	Waddel	6.5	--	--	1.3	--	0.4	--	--	--

Grainery Road

4325	09/23/91	Sopcio?	1.2	--	--	--	--	0.9	--	--	--
4354	09/23/91	Vowell	10.0	--	--	1.6	--	3.1	--	--	--
4381	01/10/91	O'Hanis	4.4	--	--	5.2	--	2.2	--	--	--

Hayloft

11733	02/05/91	Mowell	22.2	--	3.6	27.7	--	1.4	1.8	--	--
11772	01/10/91	Smalley	11.0	--	2.2	21.1	--	0.6	0.8	--	--
11775	01/15/91	Whelchel	38.5	--	6.6	34.6	--	3.8	12.9	--	--
11775	05/16/91	Whelchel	21.0	--	3.1	24.0	--	--	2.1	--	--



\*\*\*\*\*

				Concentrations in Parts Per Billion (ppb)							
Street	Number	Sample Date	Name	TCE	PCE	1,1 DCE	1,1,1 TCA	Carbon Tet	Cis1,2 DCE	1,1 DCA	1,1,2 TCA
*****											
Hayloft (cont.)											
	11793	02/05/91	Wisocki	33.0	--	1.9	23.9	--	3.5	1.6	--
	11803	03/19/91	Frey*	33.0	--	4.0	31.0	--	--	--	--
	11804	02/19/91	Harper	11.6	--	1.4	18.3	--	0.8	0.9	--
	11821	02/19/91	Berg	31.1	0.4	4.0	27.6	--	2.3	1.3	--
	11828	02/19/91	Tarara	11.1	--	2.1	16.7	--	0.9	0.6	--
	11847	04/23/91	Nanla	24.7	0.6	4.0	26.4	--	2.0	1.9	--
	11850	02/05/91	Johnson	11.5	--	1.0	15.8	--	0.9	0.6	--
	11865	02/19/91	Potenziani	25.8	0.2	2.5	28.1	--	1.8	1.5	--
	11868	01/10/91	Aisenbrey	3.9	--	--	8.1	--	--	--	--
	11890	02/05/91	Ralston	2.9	--	--	8.0	--	--	--	--
Honey Locust Lane											
	4302	01/15/91	Kever	12.9	--	0.6	6.6	--	1.6	--	--
	4317	01/22/91	Eyster*	10.0	--	--	4.0	--	--	--	--
	4324	01/15/91	Beck	11.2	--	--	5.3	--	1.5	0.5	--
	4338	01/10/91	Richards	7.9	--	--	3.3	--	1.0	--	--
Hononegh											
	4352	02/19/91	Massie	9.9	--	0.9	22.6	--	1.5	0.7	--
	4355	01/22/91	Anderson*	11.0	--	2.0	16.0	--	--	--	--
	4402	02/19/91	Olson	30.5	--	3.2	33.4	--	--	1.9	--
	4420	09/23/91	Hauser	55.3	0.5	4.7	34.4	--	6.8	1.2	--
	4434	02/19/91	Hamilton	66.5	0.4	3.5	37.2	--	9.0	2.0	--
	4444	01/10/91	Rhymer	55.1	0.1	3.4	28.1	--	6.4	1.8	0.2
	4483	12/11/90	Konieczski	12.4	0.1	0.3	3.8	--	1.4	--	--
	4562	01/10/91	Pizza	--	--	--	--	--	--	--	--
Jennifer Lane											
	4435	01/10/91	Livingston	--	--	--	--	--	--	--	--

\*\*\*\*\*

Concentrations in Parts Per Billion (ppb)

Street	Number	Sample Date	Name	TCE	PCE	1,1 DCE	1,1,1 TCA	Carbon Tet	Cis1,2 DCE	1,1 DCA	1,1,2 TCA
--------	--------	-------------	------	-----	-----	---------	-----------	------------	------------	---------	-----------

\*\*\*\*\*

Joan Drive

3928	01/22/91	Edgren	--	--	--	--	--	--	--	--	--
4103	02/05/91	Farrar	--	--	--	0.3	--	--	--	--	--
4131	01/15/91	Hudson	--	--	--	0.7	--	--	--	--	--

Mathew

4322	04/23/91	Carter	--	--	--	2.5	--	--	--	--	--
4408	02/05/91	Carr	2.4	--	--	18.3	--	--	--	0.3	--
4460	01/10/91	Johann	4.0	--	2.5	36.8	--	0.3	0.5	--	--
4474	12/11/90	Bridegan	22.5	1.9	3.3	34.0	--	3.3	1.9	0.2	--
4504	01/10/91	Daily	36.6	2.6	6.3	47.3	--	5.4	1.8	--	--
4539	02/19/91	Mettrakoudes	61.9	0.6	2.2	26.5	--	8.9	1.8	--	--
4539	05/16/91	Mettrakoudes	33.0	2.7	2.2	30.0	--	--	--	--	--
4566	05/16/91	Sager	19.0	1.7	2.3	29.0	--	--	1.6	--	--
4566	12/03/91	Sager	56.1	5.8	3.5	35.4	--	10.4	1.6	--	--
4567	12/11/90	Komarec	34.2	0.8	1.2	15.0	--	4.6	1.3	0.3	--
4567	06/04/91	Komarec	39.3	1.1	1.5	19.1	--	5.3	--	--	--

McCurry & Rte. 251

01/10/91	Kelly Sand & Gravel	3.2	--	--	--	--	--	--	--	--	--
----------	---------------------	-----	----	----	----	----	----	----	----	----	----

McCurry Road

4896	01/10/91	Roscoe Ready Mix	--	--	--	--	--	--	--	--	--
------	----------	------------------	----	----	----	----	----	----	----	----	----

North Second

12821	07/19/91	Bainbridge	--	--	--	--	--	--	--	--	--
13125	10/10/90	Waste Mgmt.	0.2	2.9	--	35.0	--	10.7	6.6	--	--
13125	04/24/91	Waste Mgmt.	0.8	3.9	1.3	29.6	--	10.2	7.4	--	--
13125	09/25/91	Waste Mgmt.	0.6	4.0	1.9	40.8	--	10.9	8.8	--	--

Oatseed Trail

4029	02/19/91	Kahlbusch	0.3	--	--	3.7	--	--	--	--	--
------	----------	-----------	-----	----	----	-----	----	----	----	----	----

\*\*\*\*\*

Concentrations in Parts Per Billion (ppb)

Street	Number	Sample Date	Name	TCE	PCE	1,1 DCE	1,1,1 TCA	Carbon Tet	Cis1,2 DCE	1,1 DCA	1,1,2 TCA
--------	--------	-------------	------	-----	-----	---------	-----------	------------	------------	---------	-----------

\*\*\*\*\*

Pfister Lane

4321	04/23/91	Gentz	7.9	--	--	1.3	--	2.2	--	--
4328	01/22/91	Wenger*	9.0	--	--	2.0	--	--	--	--
4337	01/22/91	Peters*	7.0	--	--	1.0	--	--	--	--
4340	01/15/91	Ruhmann	2.5	--	--	0.9	--	0.5	--	--
4361	01/15/91	Opperman	4.7	--	--	0.9	--	1.5	--	--

Rae Ann

12139	01/22/91	Anderson	--	--	--	--	--	--	--	--
-------	----------	----------	----	----	----	----	----	----	----	----

Rockton Road (East)

4779	01/10/91	Dargan	--	--	--	--	--	--	--	--
4950	07/19/91	Grey House	--	--	--	--	--	--	--	--
4968	07/19/91	RBR Trucking	--	--	--	--	--	--	--	--

Rollingsford

4535	01/22/91	Larson	--	--	--	--	--	--	--	--
4574	12/11/90	McGill	--	--	--	--	--	--	--	--
4621	01/22/91	Bradley	--	--	--	--	--	--	--	--
4647	01/15/91	Zinnecker	--	--	--	--	--	--	--	--
4678	01/22/91	Toepfer	--	--	--	--	--	--	--	--

Stamford

12755	01/10/91	Balin	--	--	--	--	--	--	--	--
-------	----------	-------	----	----	----	----	----	----	----	----

Straw Lane

4201	02/05/91	Spencer	0.4	--	--	2.5	--	--	--	--
4217	01/15/91	Johnson	1.3	--	--	4.5	--	--	0.2	--
4235	01/15/91	Morris	0.8	--	--	4.3	--	--	0.3	--
4238	02/19/91	Whitinger	1.5	--	--	5.1	--	0.1	--	--
4246	02/19/91	Anderson	0.8	--	--	3.5	--	--	--	--
4262	12/11/90	Rhodes	7.9	--	0.9	13.9	1.7	0.7	--	--
4270	02/05/91	Renaud	15.8	--	1.6	19.7	--	--	0.9	--

\*\*\*\*\*

Concentrations in Parts Per Billion (ppb)

Street Number	Sample Date	Name	TCE	PCE	1,1 DCE	1,1,1 TCA	Carbon Tet	Cis1,2 DCE	1,1 DCA	1,1,2 TCA
---------------	-------------	------	-----	-----	---------	-----------	------------	------------	---------	-----------

\*\*\*\*\*

Straw Lane (cont.)

4288	03/19/91	Goodin*	13.0	--	2.0	19.0	--	--	--	--
4303	02/19/91	Brackett	36.6	--	2.1	24.7	--	3.4	1.4	--
4325	01/15/91	Armstrong	37.0	--	2.3	22.1	--	3.7	1.6	--
4341	01/15/91	Burkhart	54.9	--	--	35.9	--	5.9	2.5	0.3
4367	01/22/91	Johnson*	23.0	--	--	9.0	--	--	--	--
4396	01/10/91	Hewitt	14.3	--	--	3.9	--	--	--	--
4411	01/15/91	Olson	8.1	--	--	2.3	--	1.6	0.3	--
4420	01/15/91	Bach	9.5	--	--	2.1	--	1.1	0.3	--
4472	02/05/91	Sherer	5.5	--	--	0.6	--	0.8	--	--
4486	12/11/90	Russel	2.7	--	--	0.2	--	--	--	--
4514	02/05/91	Adkisson	--	--	--	--	--	--	--	--
4527	01/22/91	Ferguson	--	--	--	--	--	--	--	--
4628	12/11/90	Cox	--	--	--	--	--	--	--	--
4691	01/10/91	Harris	--	--	--	--	--	--	--	--

Tanawingo

11412	09/23/91	Heimberger	--	--	--	--	--	--	--	--
11431	01/10/91	Stewart	--	--	--	--	--	--	--	--
11506	12/03/91	Bauer	4.7	--	--	1.4	--	2.3	--	--
11542	02/05/91	Eickhorst	8.8	--	--	4.7	--	5.2	0.6	--

Tresemer

11837	01/22/91	Froman	--	--	--	--	--	--	--	--
-------	----------	--------	----	----	----	----	----	----	----	----

Tresemer Circle

4229	12/11/90	Lentz	--	--	--	--	--	--	--	--
------	----------	-------	----	----	----	----	----	----	----	----

Valentine Court

11120	01/22/91	Speck	--	--	--	--	--	--	--	--
-------	----------	-------	----	----	----	----	----	----	----	----

Valerie

3657	02/05/91	Paul	--	--	--	--	--	--	--	--
------	----------	------	----	----	----	----	----	----	----	----

\*\*\*\*\*

Concentrations in Parts Per Billion (ppb)

Street Number	Sample Date	Name	TCE	PCE	1,1 DCE	1,1,1 TCA	Carbon Tet	Cis1,2 DCE	1,1 DCA	1,1,2 TCA
---------------	-------------	------	-----	-----	---------	-----------	------------	------------	---------	-----------

\*\*\*\*\*

Valerie (cont.)

3733	02/05/91	Reardon	--	--	--	--	--	--	--	--
4075	06/04/91	Hynnck	--	--	--	--	--	--	--	--
4118	09/23/91	Rogge	--	--	--	--	--	--	--	--
4282	12/11/90	Barlow	4.5	--	--	9.5	--	--	0.4	--

Wagon Lane

11501	01/10/91	Schmidt	13.6	--	--	10.9	--	3.6	1.3	--
11511	01/10/91	Nortch	17.6	--	2.8	29.1	--	1.3	2.1	--
11511	01/10/91	Nortch (Duplicate)	17.9	--	2.5	26.9	--	1.3	2.0	--
11512	02/05/91	Bolen	20.2	--	1.8	17.1	--	5.6	1.8	--
11549	03/19/91	Speers*	28.0	--	5.0	38.0	--	--	--	--
11568	01/15/91	Peterson	33.8	--	5.8	41.8	--	2.6	--	0.3
11568	05/16/91	Peterson	28.0	--	2.6	36.0	--	--	3.2	--
11593	02/19/91	Bares	13.6	--	1.7	24.2	--	1.0	1.7	--
11603	02/05/91	Loken	1.5	--	--	9.1	--	--	0.3	--
11612	02/19/91	Radich	--	--	--	1.2	--	--	--	--
11636	02/19/91	McKenzie	--	--	--	0.4	--	--	--	--
11708	01/22/91	Webb*	--	--	--	1.0	--	--	--	--
11823	03/19/91	Holland*	--	--	--	1.0	--	--	--	--
11856	12/11/90	Lumsden	--	--	--	1.6	--	--	--	--
11966	01/15/91	Nolan	0.4	--	--	3.0	--	--	--	--
11975	02/19/91	Gilbert	0.4	--	--	2.1	--	--	--	--
12031	02/05/91	Sage	2.6	--	--	7.3	--	--	--	--
12053	12/11/90	Beach	2.5	--	--	6.3	--	--	0.3	--
12068	03/19/91	Steiner*	2.0	--	--	6.0	--	--	--	--
12075	02/05/91	Bockoven	1.8	--	--	5.2	--	--	0.2	--
12145	12/11/90	Garcia	14.6	--	--	22.3	--	--	--	--
12199	02/19/91	Porter	37.3	--	2.7	34.6	--	4.1	1.7	0.2

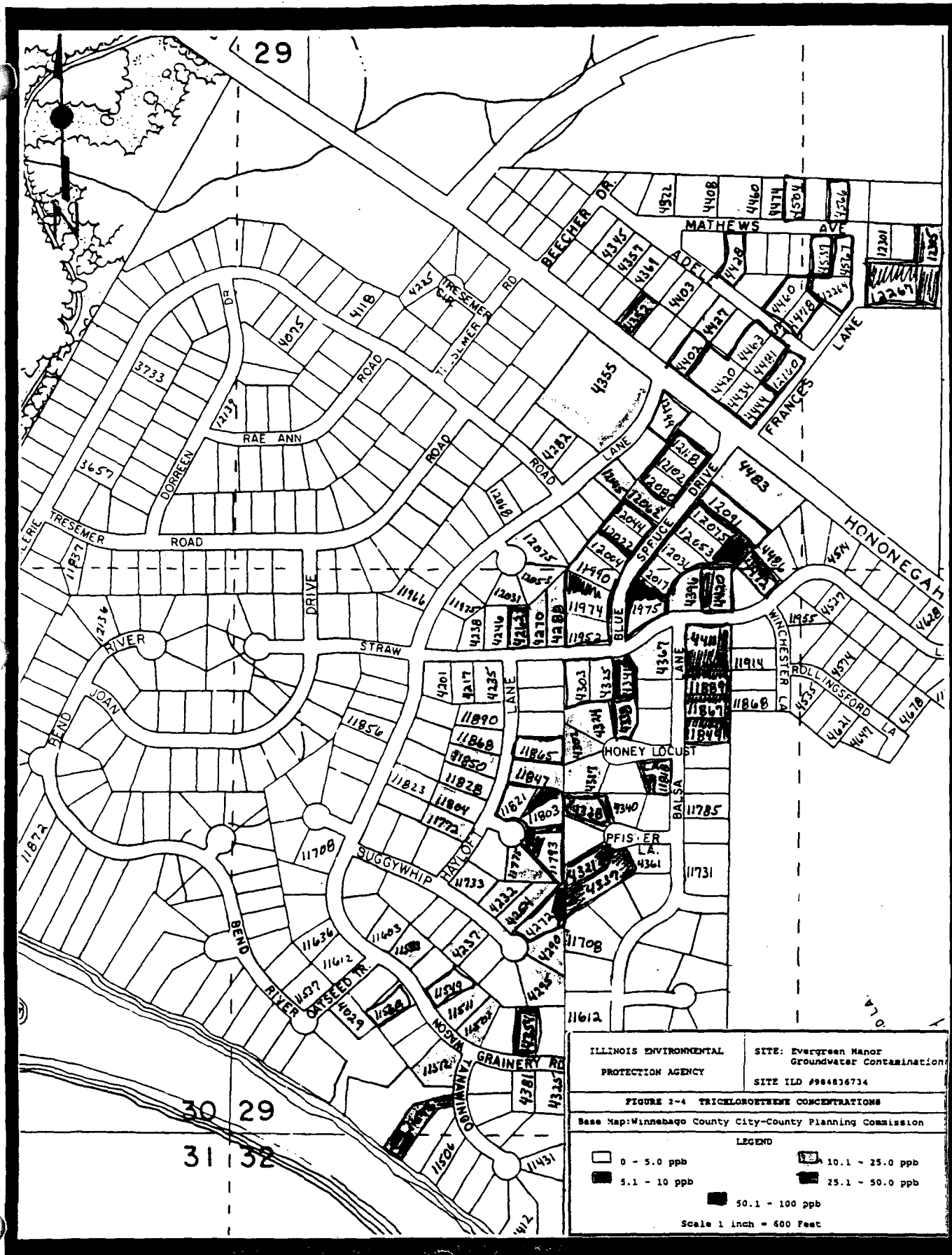
Watham Lane

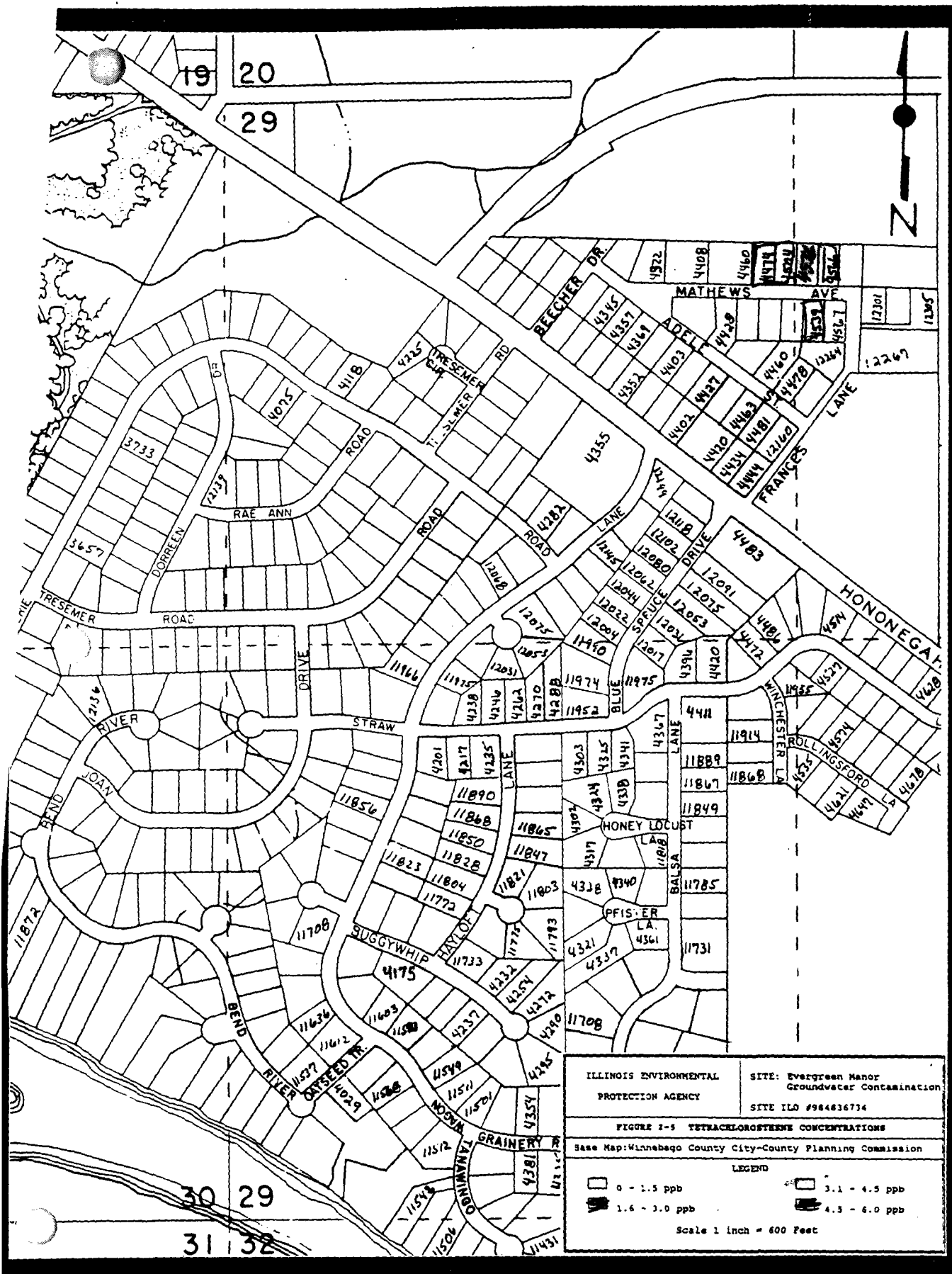
497	01/10/91	Forstling	--	--	--	--	--	--	--	--
-----	----------	-----------	----	----	----	----	----	----	----	----

\*\*\*\*\*

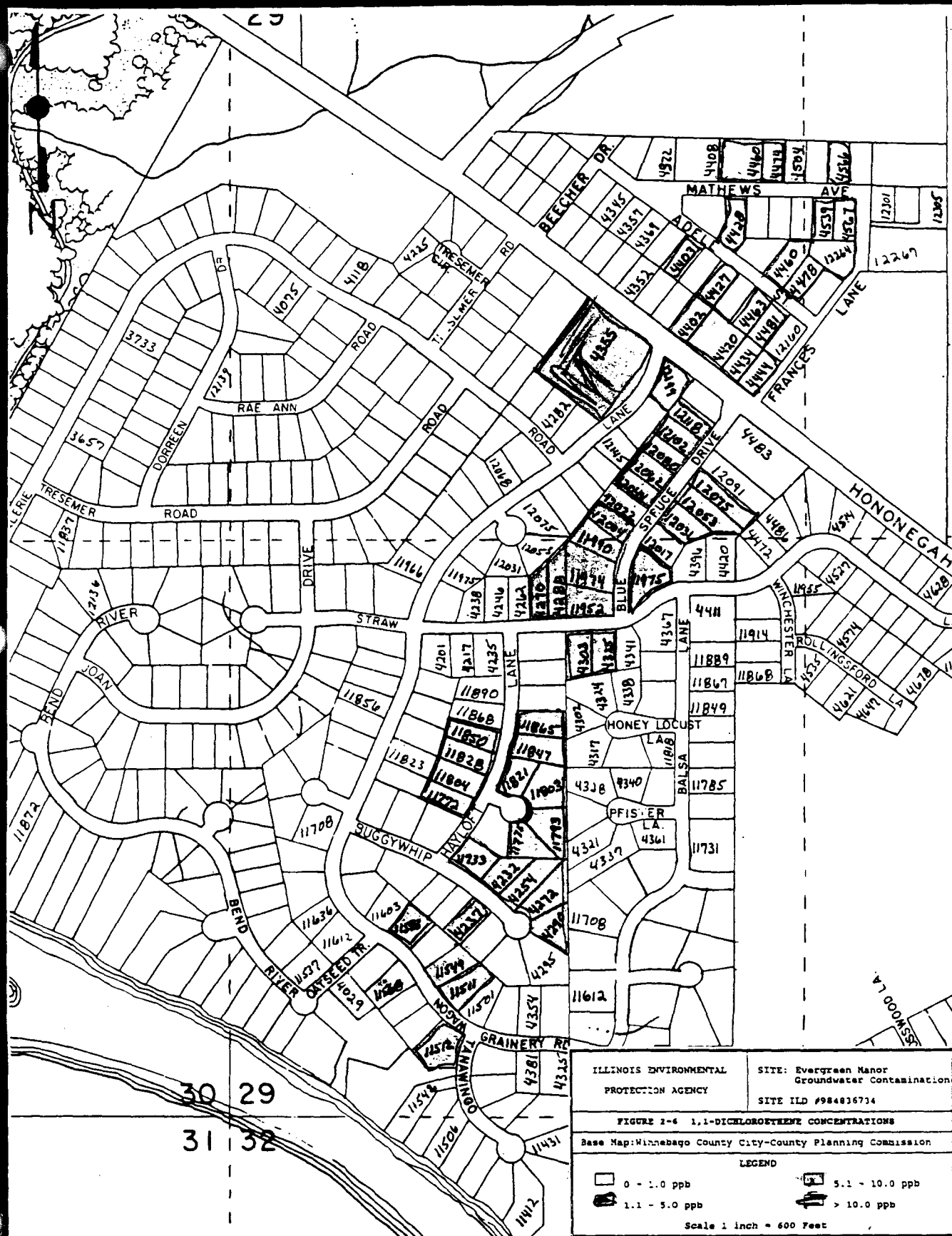
				Concentrations in Parts Per Billion (ppb)							
Sample					1,1	1,1,1	Carbon	Cis1,2	1,1	1,1,2	
Street Number	Date	Name		TCE	PCE	DCE	TCA	Tet	DCE	DCA	TCA
*****											
Winchester											
11868	01/10/91	Grustch		--	--	--	--	--	--	--	--
11914	02/05/91	Bredsome		0.5	--	--	--	--	--	--	--
11955	01/22/91	Loveland		--	--	--	--	--	--	--	--

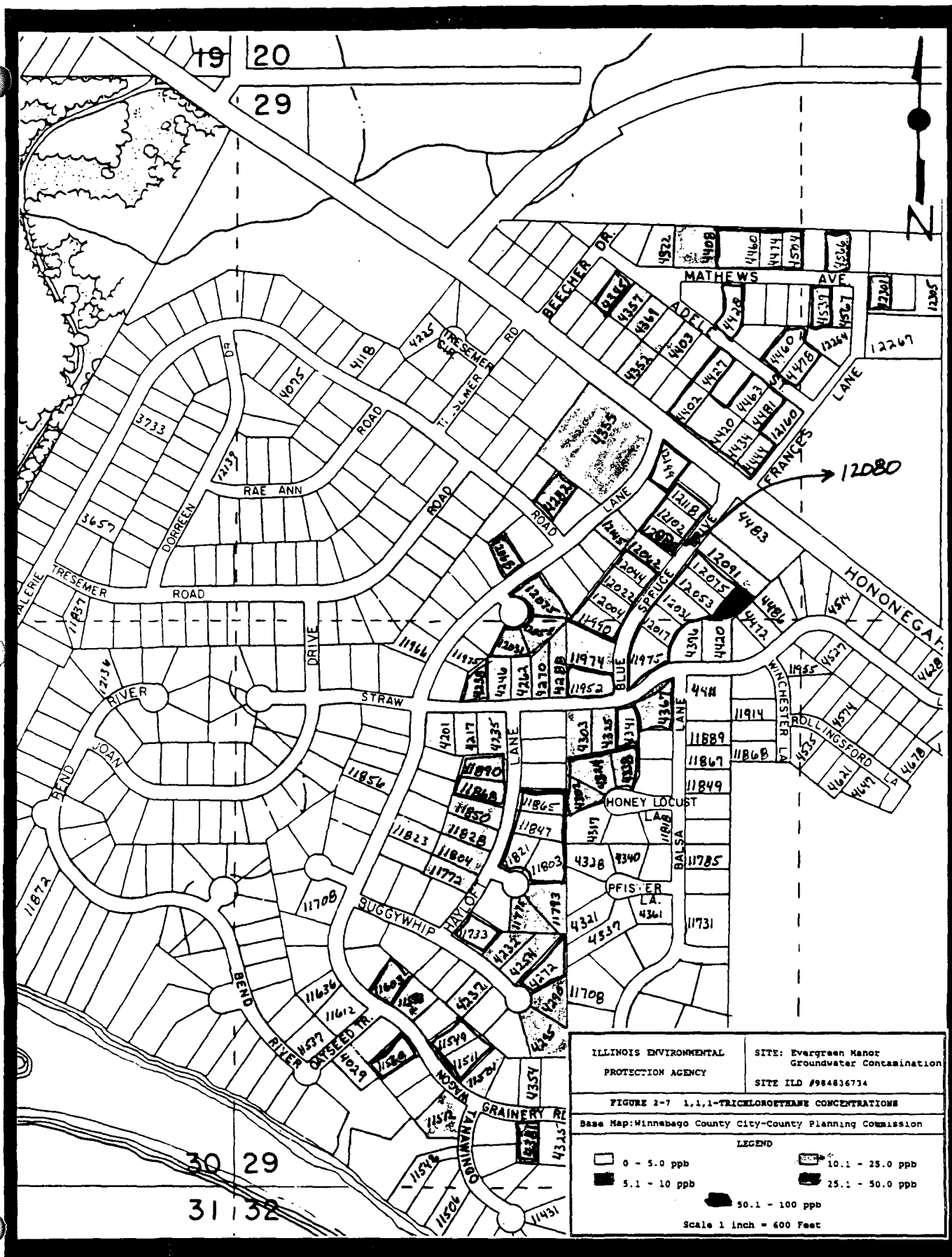
\* Indicates value was rounded.

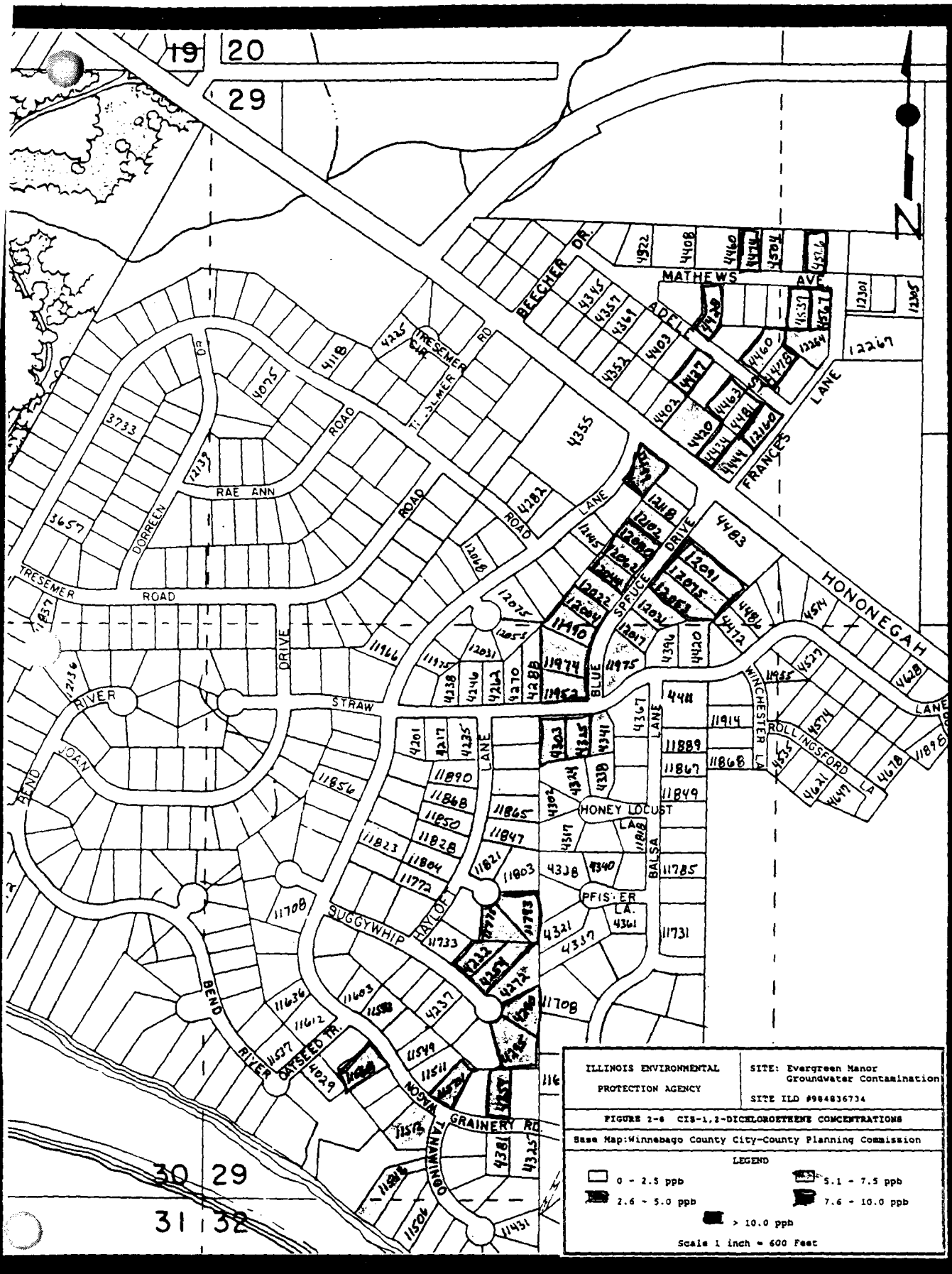


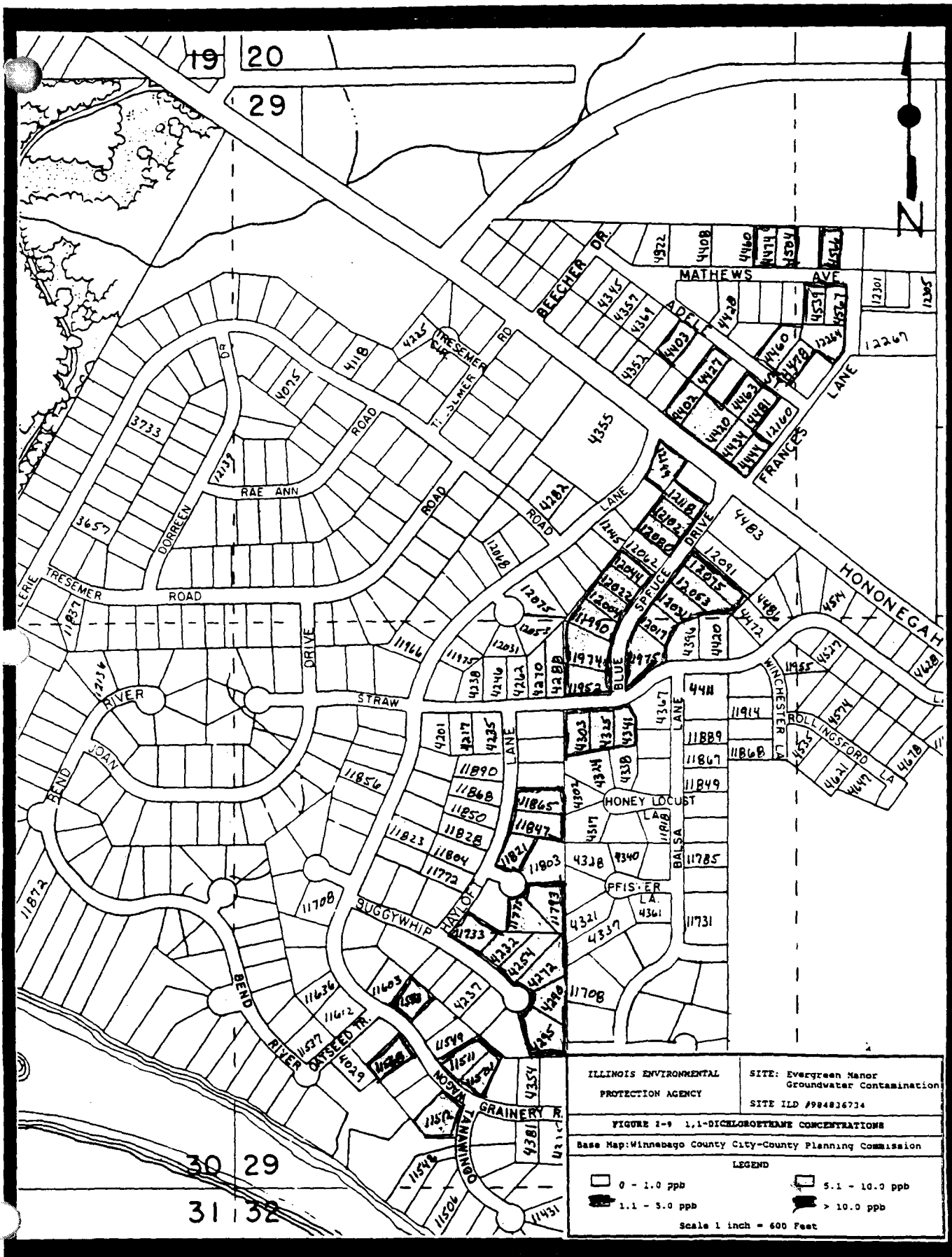


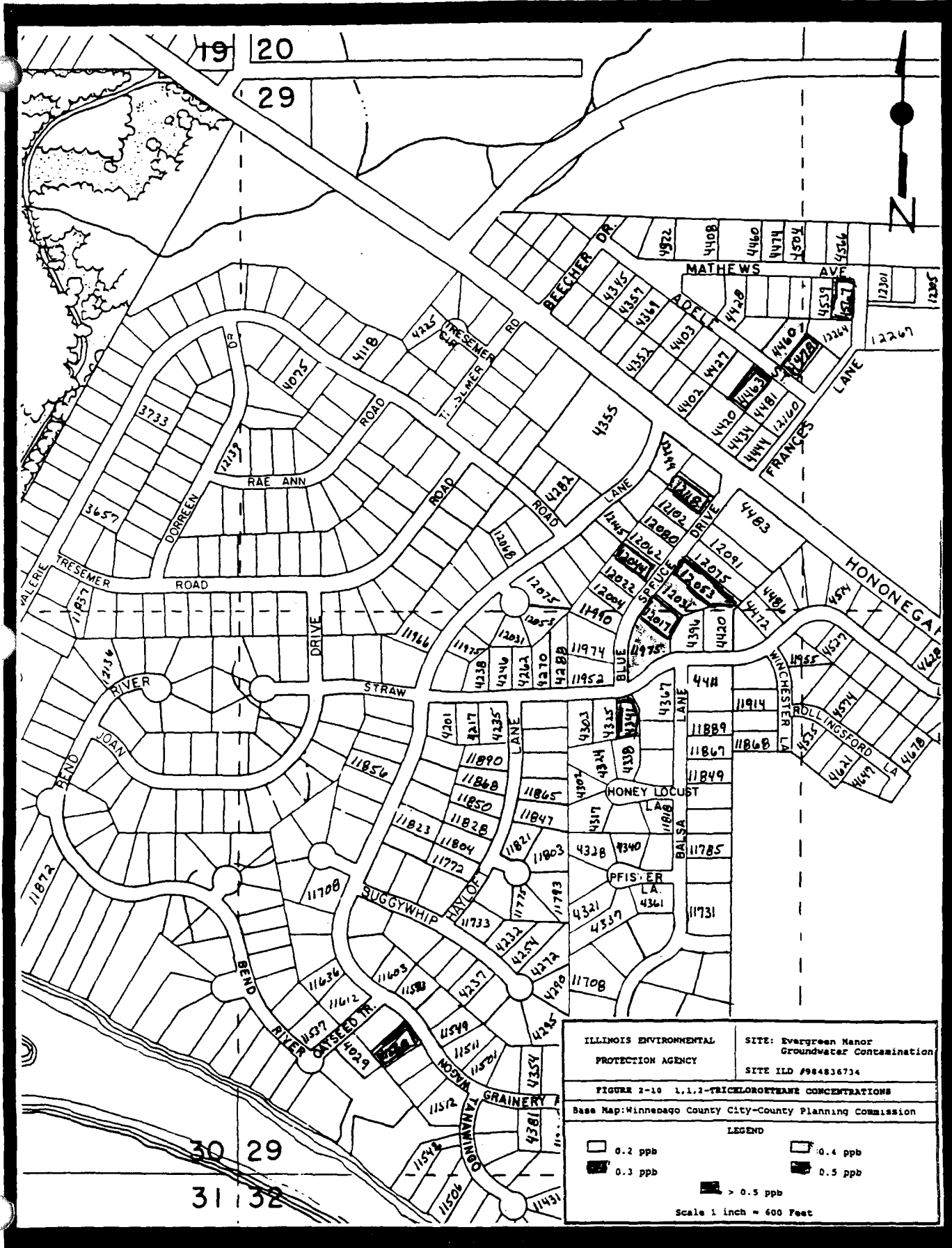


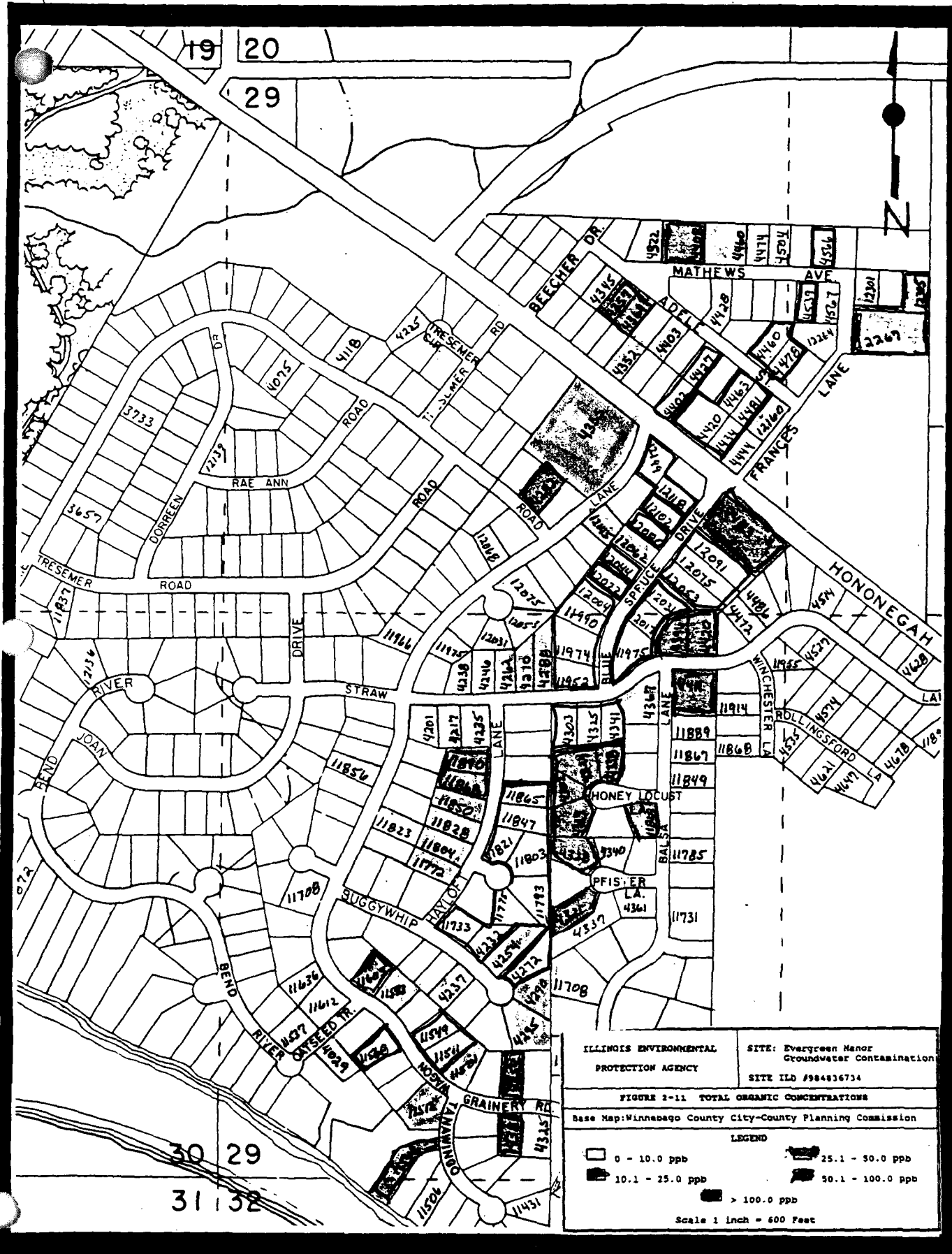












Act (AEA), the Uranium Mill Tailings Radiation Control Act (UMTRCA), the Federal Insecticide, Fungicide or Rodenticide Act (FIFRA) or the Resource Conservation and Recovery Act (RCRA).

## SECTION 3

### SCREENING SITE INSPECTION ACTIVITIES

#### 3.1 INTRODUCTION

This section outlines procedures utilized and observations made during the CERCLA Screening Site Inspection conducted at the Evergreen Manor Subdivision. Specific portions of this section contain information pertaining to the reconnaissance inspection, soil gas sampling, groundwater sampling, decontamination procedures, and the associated analytical results. The CERCLA Screening Site Inspection for the Evergreen Manor Subdivision was conducted in accordance with the site inspection work plan which was developed and submitted to U.S. EPA Region V prior to the initiation of field sampling activities. The "Potential Hazardous Waste Site Inspection Report" (U.S. EPA Form 2070-13) for the Evergreen Manor Subdivision is located in Appendix C of this report.

#### 3.2 RECONNAISSANCE INSPECTION

On March 18, 1992, Mr. Greg Dunn of the Illinois Environmental Protection Agency (IEPA) conducted a CERCLA Screening Site Inspection reconnaissance inspection at the Evergreen Manor Subdivision. The reconnaissance included a visual inspection to delineate the boundaries of the four residential subdivisions, the identification of potential soil gas sampling locations and the gaining of access to the sampling locations. The potential sampling locations included areas on the north side of McCurry Road (which is north of Hononegah Heights), west of State Route 251 and the ditch between Route 251 and North Second Street (which is the frontage road east of Route 251).

The reconnaissance visit confirmed that the Evergreen Manor Subdivision is located northwest of Roscoe, Illinois, south of Hononegah Road. Current land use in close



proximity to the site includes residential areas to the south and east, the Hononegah Forest Preserve to the west and agricultural areas the north. Drainage from the subdivision flows south toward the Rock River.

### 3.3 SOIL GAS SAMPLING

The Illinois EPA Site Assessment Program contacted U.S. EPA about the use of their Geoprobe (Geoprobe, Salina, Kansas) hydraulic probe driving system, to conduct a soil gas survey in the Evergreen Manor area. U.S. EPA and Lockheed Engineering and Sciences Company Environmental Services Assistance Team (ESAT) Field Analytical Support Program (FASP) provided personnel to operate the Geoprobe and technicians to analyze the samples. The Geoprobe drives a one (1) inch outside diameter by one-half (1/2) inch inside diameter steel probe in three foot sections to the required depth. The tip of the probe is outfitted with a leave-behind point that requires the probe to be pulled back twelve (12) inches after reaching the desired sampling depth. A one-quarter (1/4) inch outside diameter by one-eighth (1/8) inch inside diameter teflon tube with a threaded fitting is lowered into the probe until reaching the bottom. Once hitting the bottom, the Teflon tubing is twisted to cause the fitting to thread into the probe bottom. With the connection between the probe bottom and tubing completed, the Teflon tubing is purged of one (1) liter of soil gas using a vacuum pump, which is equivalent to three well volumes of the tubing.

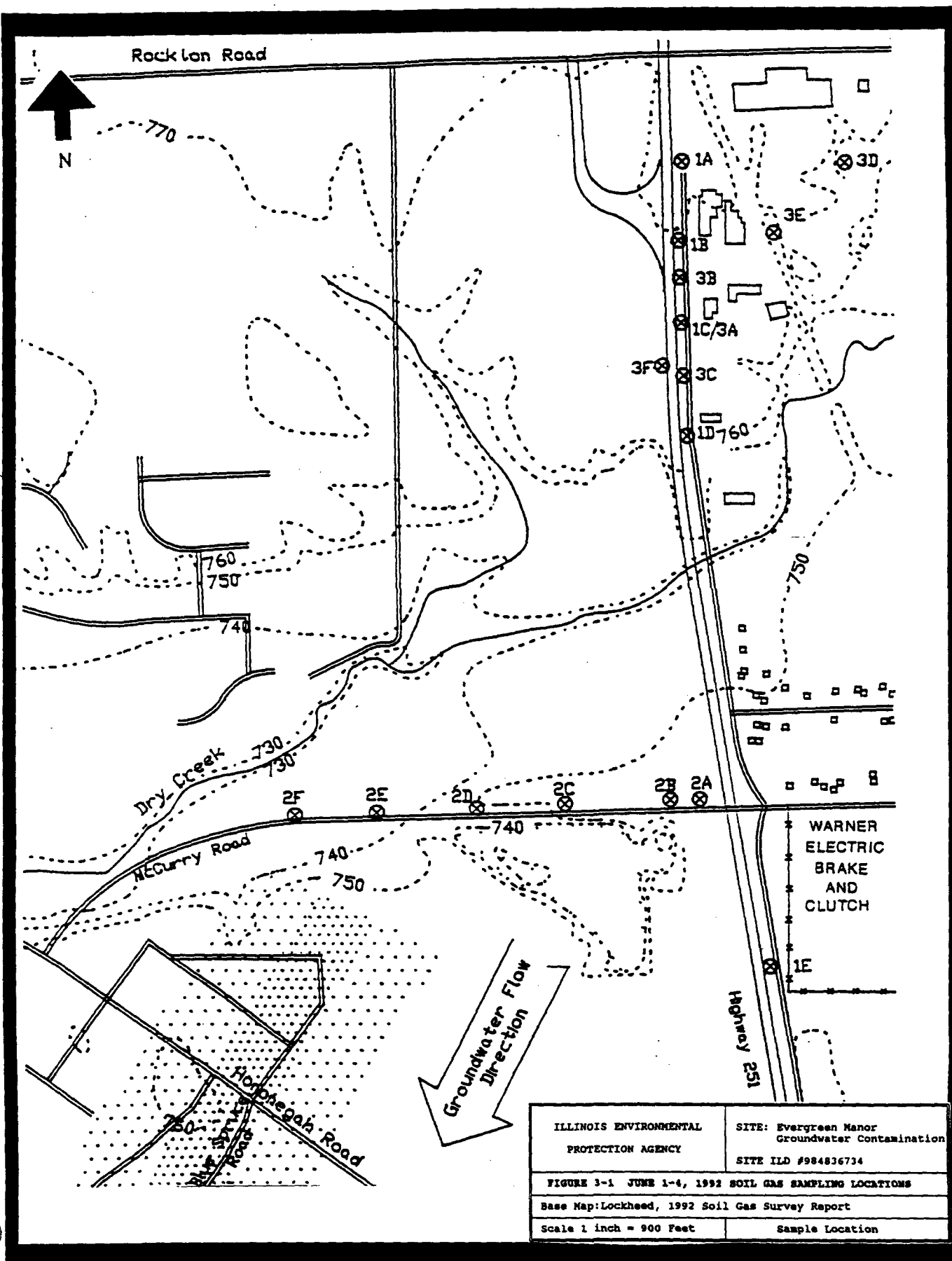
Soil gas samples were collected in a seven (7) inch long by one-quarter (1/4) inch outside diameter stainless steel tube filled with activated charcoal and carbon molecular sieve (Supelco, catalog number 2-0370-M). The sampling method required that the tube be put in line with the sampling line emerging from the probe and drawing six (6) liters of soil gas through the tube. The activated charcoal retained the vapor-phase volatile organic compounds and provided stable and rugged sample containment and lowered the

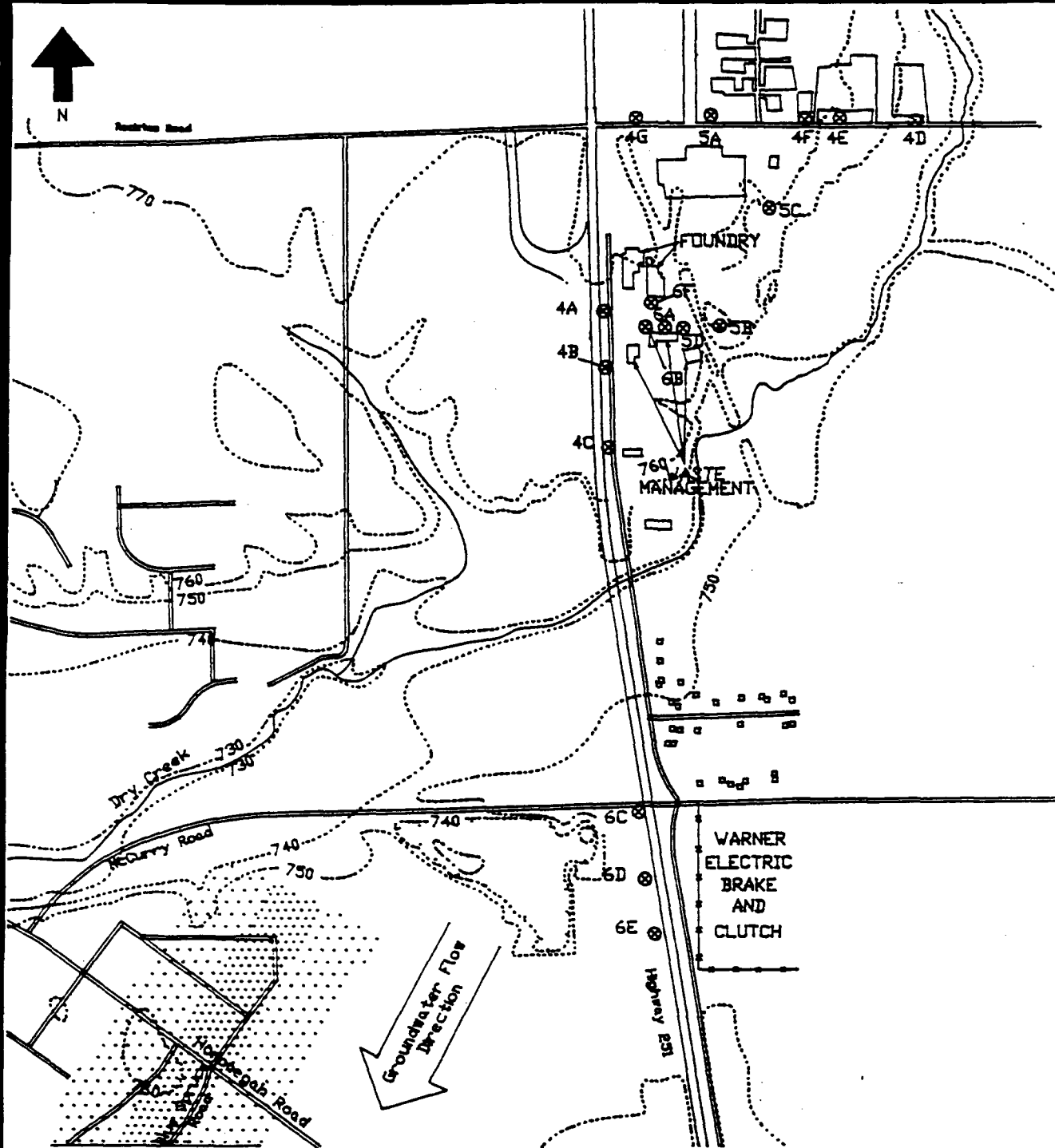
detection limit by utilizing a large sample size. The sample tubes were taken to the Field Analytical Support Program's analytical laboratory and analyzed by first thermally desorbing the tube and then injecting the tube's contents into a gas chromatograph (Varian 3400) with an electrolytic conductivity detector.

A total of thirty-nine (39) soil gas samples were collected during the June 1-4, 1992 and August 10-13, 1992 investigation of the Evergreen Manor Groundwater Contamination area (see Appendix E and Appendix F for the complete soil gas survey reports). Samples were collected on the north side of McCurry Road, east side of route 251, behind the Ecolab facility and on the north side of Rockton Road (see Figures 3-1 and 3-2 for the sampling locations). These areas were selected because of the ease of access and the locations were also upgradient of the groundwater flow established in the area.

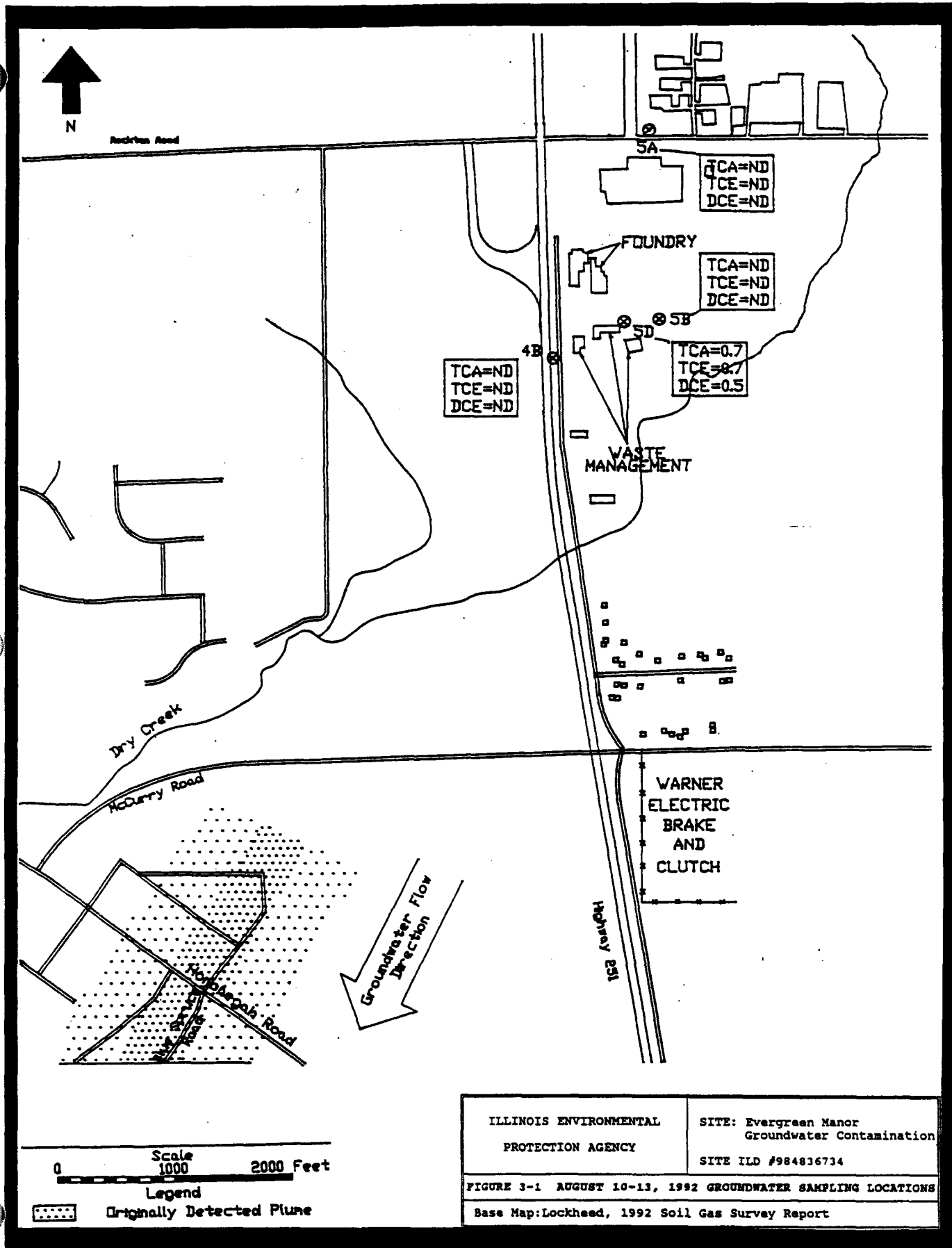
### 3.4 GROUNDWATER SAMPLING

Groundwater samples were also collected using the Geoprobe. The one (1) inch outside diameter by one-half (0.5) inch inside diameter probe sections were fitted with a slotted groundwater sampling tip which was driven to a depth approximately three (3) feet below the expected groundwater level. (the water level within the installed probe was checked using an electronic water level meter.) Due to the depth to groundwater, a peristaltic pump could not be used and the bailer would not travel the length of the probe because of bends in the probe, a method of pipetting was used. To "pipette" the sample, a length of clean 3/16 inch inside diameter teflon tubing was lowered down the probe into the water. A vacuum was applied to the tube with the Geoprobe's vacuum pump and groundwater was drawn up into the lower ten (10) feet of the tubing. With the groundwater held in the tubing by the vacuum, the tubing was clamped and pulled up to the surface. The vacuum was then released and the groundwater flowed out of the tubing and was collected in twenty-two (22) milliliter vials.





ILLINOIS ENVIRONMENTAL PROTECTION AGENCY	SITE: Evergreen Manor Groundwater Contamination SITE ID: #984836734
FIGURE 3-2 AUGUST 10-13, 1992 SOIL GAS SAMPLING LOCATIONS Base Map: Lockheed, 1992 Soil Gas Survey Report	



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY	SITE: Evergreen Manor Groundwater Contamination SITE ID #984836734
FIGURE 3-1 AUGUST 10-13, 1992 GROUNDWATER SAMPLING LOCATIONS	
Base Map: Lockheed, 1992 Soil Gas Survey Report	

The soil gas and groundwater sample bottles were placed on ice and delivered nightly to the U.S. EPA Central Regional Laboratory in Chicago, Illinois for analysis. The soil samples were analyzed using a gas chromatograph (Varian 3400) with an electrolytic conductivity detector and the groundwater samples were analyzed by gas chromatography/mass spectrometry. A copy of the photographs of the CERCLA Screening Site Inspection are provided in Appendix D.

Decontamination procedures were followed prior to the collection of all soil gas and groundwater samples. The procedures, performed in the field, included the cleaning of all equipment (steel probes, hand tools, etc.), with a liquid Alconox solution, rinsing with tap water, rinsing with acetone, and final rinsing with distilled water. The teflon tubing was purged, by drawing air through the Teflon tubing, prior to use on the next sample location.

### 3.5 ANALYTICAL RESULTS

This section provides a summary of the analytical results of samples collected during the CERCLA Screening Site Inspection conducted near the Evergreen Manor Groundwater Contamination area near Roscoe, Illinois.

Laboratory analyses of the thirty-nine (39) soil gas samples and the four (4) groundwater samples collected by U.S. EPA and their contractor revealed the presence of volatile organic compounds in the soil gas and groundwater.

Three volatile compounds, 1,1,1-trichloroethane, trichloroethene and 1,1-dichloroethene, were targeted during the soil gas and groundwater sampling inspection using the Geoprobe. The results of the soil gas survey along McCurry Road and North Second

Street (Route 251 frontage Road) revealed all three organic compounds. Soil gas samples collected behind the Ecolab facility and on the north side of Rockton Road did not reveal any of the volatile compounds of concern. Groundwater samples from Rockton Road, behind Ecolab and on the frontage road did not reveal any organic compounds, but the sample taken along the northern boundary of the Waste Management facility indicated all three compounds of concern.

## SECTION 4

### IDENTIFICATION OF SOURCES

#### 4.1 INTRODUCTION

This section describes the source which has been identified in the initial stages of the CERCLA site investigation at the Evergreen Manor Groundwater Contamination area.

Information concerning the size, volume and waste composition of each source has been collected during the Preliminary Assessment and this Screening Site Inspection. The values presented are based on documented visual observations, aerial photographs and analytical data.

#### 4.2 GROUNDWATER PLUME

##### 4.2.1 Description

The groundwater plume source has been identified from the northern portion of the Hononegah Heights Subdivision to the southern end of the Evergreen Manor Subdivision. The plume, identified from previous sampling events, is concentrated in the sand and gravel aquifer, with some contaminated wells as deep as 65 feet deep. This aquifer is a major source of drinking water for the residents of the Hononegah Heights Subdivision, Evergreen Manor Subdivision, Tresemer Subdivision and the Olde Farm Subdivision.

##### 4.2.2 Waste Characteristics

The private wells in the four above mentioned subdivisions were sampled by Illinois Public Health and U.S. EPA personnel between December 11, 1990 and December 3, 1991. Analytical results from the wells reveal contamination of the groundwater by an unidentified source. The contaminants found in the groundwater include trichloroethene,



tetrachloroethene, 1,1-dichloroethene, 1,1-dichloroethane, 1,1,1-trichloroethane, cis-1,2-dichloroethene and 1,1,2-trichloroethane. The groundwater plume has been measured, using the area of contamination from the private wells, to be 800 feet across by 4800 feet long for a total area of 3,840,000 square feet.

#### 4.2.3 Potentially Affected Migration Pathways

The Evergreen Manor Groundwater plume could potentially affect two of the migration pathways. The plume has already affected drinking water in the subdivisions and could affect more wells depending on the source and extent of the plume northward. Residential wells near the Rock River, in the south portion of Evergreen Manor Subdivision, are contaminated and groundwater in this area could be discharging to the river. The air and soils pathways are not known to be affected at this time and may not be pathways of concern.

## SECTION 5

### MIGRATION PATHWAYS

#### 5.1 INTRODUCTION

This section includes information that may be useful in analyzing the Evergreen Manor Groundwater Contamination's impact on the four migration pathways identified in the CERCLA's Hazard Ranking System (HRS). The migration pathways which will be analyzed in this section are groundwater, surface water, air and soil.

#### 5.2 GROUNDWATER PATHWAY

Groundwater samples were collected during the Screening Site Inspection conducted at the Evergreen Manor Groundwater Contamination area. Results of the samples indicated contamination to the shallow aquifer. Private wells in the area were sampled by Illinois Department of Public Health and U.S. EPA personnel between December of 1990 and December 1991. The results of the private well analyses indicated groundwater contamination to the major aquifer of concern in the area by seven (7) volatile organic compounds (see Table 2-1 for a summary of the analytical results).

The geology of the Roscoe, Illinois area is dominated by a bedrock valley, which was carved through the Galena-Platteville Dolomite exposing the underlying St. Peter Sandstone. The bedrock valley has been filled primarily with sands and gravels as deep as 250 feet. Well logs in the area of the Evergreen Manor Subdivision confirm the presence of the sands and gravels down to 250 feet. Sandstone is encountered from 250 to 294 feet, underlain by interbedded layers of sandstone, limestone and shale. The aquifer of concern includes the shallow sand and gravel aquifer, along with the bedrock aquifers below supplying water to residents in the area.

Groundwater is the only source of drinking water used within the vicinity of the Evergreen Manor Subdivision. Well logs indicate a majority of the private wells within the subdivision obtaining water from 50 to 80 below ground surface, in the sand and gravel aquifer. According to Illinois EPA Division of Public Water Supplies, within four miles of the Evergreen Manor Subdivision there are fourteen (14) known public wells using water from the aquifer concern, with those wells servicing 17,075 people. Well logs obtained from the Illinois State Water Survey, an estimated 6000 people within four miles of the subdivision obtain water from private wells for drinking (see Table 5-1 for a list of wells within four miles).

No on-site sources lie either partially or wholly within a designated wellhead Protection Area (as defined by Section 1428 of the Safe Drinking Water Act). However, fourteen (14) Wellhead Protection Areas do exist within the 4-mile target distance limit.

<u>Table 5-1</u>				
<u>Groundwater Target Populations</u>				
<u>Distance Miles</u>	<u>Private Wells</u>	<u>Public Wells</u>	<u>Non-Community Wells</u>	<u>Total Population</u>
0 - 1/4	282	0	0	736
1/4 - 1/2	158	0	0	412
1/2 - 1	126	2	11	6996
1 - 2	194	2	26	474
2 - 3	689	3	17	3719
3 - 4	847	7	5	9551
Winnebago County average population: 2.61 people/household				

### 5.3 SURFACE WATER PATHWAY

No surface water samples were collected during the CERCLA Screening Site Inspection conducted near the Evergreen Manor Subdivision. However, residential wells sampled

near the Rock River indicate that contaminants could be discharged to the surface water via the groundwater route.

Surface water in the area consists of the Rock River, which is located on the southern edge of the Evergreen Manor and Olde Farm Subdivisions. The fifteen (15) mile downstream route continues along the Rock River for the entire fifteen miles. According to U.S. Geological Survey Water Data Report IL-89-1, the average discharge of Rock River at Roscoe, Illinois is approximately 4000 cubic feet per second (cfs).

There are no known surface water intakes within the fifteen (15) mile downstream surface water route of the Evergreen Manor Subdivision. However, according to the National Wetlands Inventory Maps prepared by the U.S. Department of the Interior, wetlands exist approximately one-quarter (1/4) mile downstream from the probable point of entry and additional wetlands are located along the full 15-mile surface water route. According to information obtained from the Illinois Department of Conservation Impact Analysis Section, the Rock river in Winnebago County is classified as a highly valued aquatic resource.

#### 5.4 AIR PATHWAY

No air samples were obtained nor were any visually documented releases to the air observed during the CERCLA Screening Site Inspection. The air pathway is not of concern at this time, but may be a pathway of concern when the source of the groundwater plumes is found.

#### 5.5 SOIL EXPOSURE PATHWAY

No soil samples were obtained nor were any visually contaminated soils observed during the CERCLA Screening Site Inspection. The soil pathway is not of concern at this time,

but may be a pathway of concern when the source of the groundwater plumes is found.

## Section 6

### BIBLIOGRAPHY

- Bureau of the Census. County and City Data Book. 1990 U.S. Census data.
- Department of the Interior. Water Resources Data - Illinois, Water Year 1989 Volume 1. Illinois except Illinois River Basin. U.S. Geological Survey, 1990.
- Illinois Department of Energy and Natural Resources, State Water Survey, water well records of wells in Winnebago County, Illinois.
- Illinois Department of Transportation Bureau of Location and Environment, Aerial Survey Section, aerial photographs for the years 1964 and 1988.
- Illinois Environmental Protection Agency Bureau of Land file for Evergreen Manor Subdivision, L2010400015.
- Lockheed Engineering and Sciences Company, Soil-Gas Survey Report for the Evergreen Manor Subdivision, Roscoe, Illinois - June, 1992, prepared for the U.S. EPA.
- Lockheed Engineering and Sciences Company, Soil-Gas Survey Report for the Evergreen Manor Subdivision, Roscoe, Illinois - August, 1992, prepared for the U.S. EPA.
- Lutz, Richard W. Illinois Department of Conservation, Division of Planning, Impact Analysis Section Supervisor. November 12, 1991 correspondence with Judy Triller.
- U.S. Department of the Interior, Fish and Wildlife Service, National Wetlands Inventory Map for South Beloit and Rockford North, Illinois.
- U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Pre-Remedial Strategy for Implementing SARA, Directive Number 9345.2-01, Washington D.C., February 12, 1988.
- U.S. Geological Survey, 1972, Belvidere NW, Illinois 7.5 Minute Quadrangle.
- U.S. Geological Survey, 1980, Caledonia, Illinois 7.5 Minute Quadrangle.
- U.S. Geological Survey, 1980, Rockford North, Illinois 7.5 Minute Quadrangle.
- U.S. Geological Survey, 1972, South Beloit, Illinois-Wisconsin 7.5 Minute Quadrangle.
- Willman, H.B. et al, Handbook of Illinois Stratigraphy, Illinois State Geological Survey, Bulletin 95, 1975.

**APPENDIX A**

**SITE 4-MILE RADIUS MAP**

**APPENDIX B**  
**15-MILE SURFACE WATER MAP**



**APPENDIX C**

**U.S. EPA FORM 2070-13**



# Site Inspection Report



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
IL 984836734

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) Evergreen Manor Groundwater Contamination		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER Homonogah Road			
03 CITY Roscoe	04 STATE IL	05 ZIP CODE 61073	06 COUNTY Winnebago	07 COUNTY CODE 201	08 CONG DIST 16
09 COORDINATES LATITUDE 42 36 22. - LONGITUDE -89 21 52. -		10 TYPE OF OWNERSHIP (Check one) <input type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input type="checkbox"/> F. OTHER <input checked="" type="checkbox"/> G. UNKNOWN			

III. INSPECTION INFORMATION

01 DATE OF INSPECTION 06/01/92 MONTH DAY YEAR	02 SITE STATUS <input type="checkbox"/> ACTIVE <input type="checkbox"/> INACTIVE	03 YEARS OF OPERATION BEGINNING YEAR _____ ENDING YEAR _____ X UNKNOWN
04 AGENCY PERFORMING INSPECTION (Check all that apply) <input checked="" type="checkbox"/> A. EPA <input checked="" type="checkbox"/> B. EPA CONTRACTOR _____ (Name of firm) <input type="checkbox"/> C. MUNICIPAL <input type="checkbox"/> D. MUNICIPAL CONTRACTOR _____ (Name of firm) <input type="checkbox"/> E. STATE <input type="checkbox"/> F. STATE CONTRACTOR _____ (Name of firm) <input type="checkbox"/> G. OTHER _____ (Specify)		

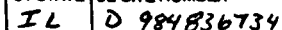
05 CHIEF INSPECTOR Gregory W. Dunn	06 TITLE EPS	07 ORGANIZATION IEPA	08 TELEPHONE NO. (217) 782-6761
09 OTHER INSPECTORS Steve Peterson	10 TITLE	11 ORGANIZATION USEPA	12 TELEPHONE NO. (312) 353-1422
MeL Kaminsky	Chemist	Lockheed	(312) 886-2915
Gary Hochgraf	Hydrogeologist	Lockheed	(312) 886-2915
Steve Schroedel	Geologist	lockheed	(312) 886-2915
			( )

13 SITE REPRESENTATIVES INTERVIEWED None	14 TITLE	15 ADDRESS	16 TELEPHONE NO ( )
			( )
			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one) <input checked="" type="checkbox"/> PERMISSION <input type="checkbox"/> WARRANT	18 TIME OF INSPECTION	19 WEATHER CONDITIONS Sunny, Hot, ~ to Rainy, windy, cool
--	-----------------------	--

IV. INFORMATION AVAILABLE FROM

01 CONTACT Judy Triller	02 OF (Agency/Organization) Illinois EPA	03 TELEPHONE NO. (217) 782-6761		
04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM Gregory W. Dunn	05 AGENCY IEPA	06 ORGANIZATION Site Assessment Program	07 TELEPHONE NO. (217) 782-6761	08 DATE 09/29/92 MONTH DAY YEAR





POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
IL D 984836734

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA  
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

☐ POTENTIAL

☐ ALLEGED

NA

01 ☐ K. DAMAGE TO FAUNA  
04 NARRATIVE DESCRIPTION (include names of species)

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

☐ POTENTIAL

☐ ALLEGED

NA

01 ☐ L. CONTAMINATION OF FOOD CHAIN  
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

☐ POTENTIAL

☐ ALLEGED

NA

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES  
(Spills/Runoff/Standing liquids, Leaking drums)

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_

04 NARRATIVE DESCRIPTION

NA

01 ☐ N. DAMAGE TO OFFSITE PROPERTY  
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

☐ POTENTIAL

☐ ALLEGED

NA

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs  
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

☐ POTENTIAL

☐ ALLEGED

NA

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING  
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

☐ POTENTIAL

☐ ALLEGED

NA

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 21887

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e. g., state files, sample analysis, reports)

IEPA Land File  
IDPH file for Evergreen Manor



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
IL D 984836734

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION 02 ☒ OBSERVED (DATE: 1990) ☐ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: 21887 04 NARRATIVE DESCRIPTION

See pages 39-40 of SSI Report

01 ☒ B. SURFACE WATER CONTAMINATION 02 ☐ OBSERVED (DATE:           ) ☒ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: Unknown 04 NARRATIVE DESCRIPTION

See pages 40-41 of SSI Report

01 ☐ C. CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE:           ) ☐ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED:            04 NARRATIVE DESCRIPTION

Not applicable (NA)

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE:           ) ☐ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED:            04 NARRATIVE DESCRIPTION

NA

01 ☒ E. DIRECT CONTACT 02 ☒ OBSERVED (DATE: 1990) ☐ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: 21887 04 NARRATIVE DESCRIPTION

See pages 39-40 of SSI Report

01 ☐ F. CONTAMINATION OF SOIL 02 ☐ OBSERVED (DATE:           ) ☐ POTENTIAL ☐ ALLEGED  
03 AREA POTENTIALLY AFFECTED:            (Acres) 04 NARRATIVE DESCRIPTION

NA

01 ☒ G. DRINKING WATER CONTAMINATION 02 ☒ OBSERVED (DATE: 1990) ☐ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: 21887 04 NARRATIVE DESCRIPTION

See pages 39-40 of SSI Report

01 ☐ H. WORKER EXPOSURE/INJURY 02 ☐ OBSERVED (DATE:           ) ☐ POTENTIAL ☐ ALLEGED  
03 WORKERS POTENTIALLY AFFECTED:            04 NARRATIVE DESCRIPTION

NA

01 ☐ I. POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED (DATE:           ) ☐ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED:            04 NARRATIVE DESCRIPTION

NA



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION  
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
IL D 984836734

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
<input type="checkbox"/> A. NPDES				
<input type="checkbox"/> B. UIC				
<input type="checkbox"/> C. AIR				
<input type="checkbox"/> D. RCRA				
<input type="checkbox"/> E. RCRA INTERIM STATUS				
<input type="checkbox"/> F. SPCC PLAN				
<input type="checkbox"/> G. STATE (Specify)				
<input type="checkbox"/> H. LOCAL (Specify)				
<input type="checkbox"/> I. OTHER (Specify)				
<input checked="" type="checkbox"/> J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE	04 TREATMENT (Check all that apply)	05 OTHER
<input type="checkbox"/> A. SURFACE IMPOUNDMENT			<input type="checkbox"/> A. INCINERATION	<input checked="" type="checkbox"/> A. BUILDINGS ON SITE
<input type="checkbox"/> B. PILES			<input type="checkbox"/> B. UNDERGROUND INJECTION	
<input type="checkbox"/> C. DRUMS, ABOVE GROUND			<input type="checkbox"/> C. CHEMICAL/PHYSICAL	
<input type="checkbox"/> D. TANK, ABOVE GROUND			<input type="checkbox"/> D. BIOLOGICAL	
<input type="checkbox"/> E. TANK, BELOW GROUND			<input type="checkbox"/> E. WASTE OIL PROCESSING	
<input type="checkbox"/> F. LANDFILL			<input type="checkbox"/> F. SOLVENT RECOVERY	
<input type="checkbox"/> G. LANDFARM			<input type="checkbox"/> G. OTHER RECYCLING/RECOVERY	
<input type="checkbox"/> H. OPEN DUMP			<input type="checkbox"/> H. OTHER (Specify)	
<input type="checkbox"/> I. OTHER (Specify)				

07 COMMENTS

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE    ☐ B. MODERATE    ☐ C. INADEQUATE, POOR    ☒ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Source of groundwater plume is unidentified, but waste have been found in the groundwater

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO

02 COMMENTS

Through water use in homes

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

IDPH files  
IEPA Land Files



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION  
01 STATE 02 SITE NUMBER  
JL D 984836734

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)	02 STATUS	03 DISTANCE TO SITE															
<table><tr><td>SURFACE</td><td>WELL</td></tr><tr><td>COMMUNITY A. <input type="checkbox"/></td><td>B. <input checked="" type="checkbox"/></td></tr><tr><td>NON-COMMUNITY C. <input type="checkbox"/></td><td>D. <input checked="" type="checkbox"/></td></tr></table>	SURFACE	WELL	COMMUNITY A. <input type="checkbox"/>	B. <input checked="" type="checkbox"/>	NON-COMMUNITY C. <input type="checkbox"/>	D. <input checked="" type="checkbox"/>	<table><tr><td>ENDANGERED</td><td>AFFECTED</td><td>MONITORED</td></tr><tr><td>A. <input type="checkbox"/></td><td>B. <input type="checkbox"/></td><td>C. <input checked="" type="checkbox"/></td></tr><tr><td>D. <input type="checkbox"/></td><td>E. <input checked="" type="checkbox"/></td><td>F. <input type="checkbox"/></td></tr></table>	ENDANGERED	AFFECTED	MONITORED	A. <input type="checkbox"/>	B. <input type="checkbox"/>	C. <input checked="" type="checkbox"/>	D. <input type="checkbox"/>	E. <input checked="" type="checkbox"/>	F. <input type="checkbox"/>	A. <u>0.60</u> (mi) B. <u>0.001</u> (mi)
SURFACE	WELL																
COMMUNITY A. <input type="checkbox"/>	B. <input checked="" type="checkbox"/>																
NON-COMMUNITY C. <input type="checkbox"/>	D. <input checked="" type="checkbox"/>																
ENDANGERED	AFFECTED	MONITORED															
A. <input type="checkbox"/>	B. <input type="checkbox"/>	C. <input checked="" type="checkbox"/>															
D. <input type="checkbox"/>	E. <input checked="" type="checkbox"/>	F. <input type="checkbox"/>															

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☒ A. ONLY SOURCE FOR DRINKING  
☐ B. DRINKING (Other sources available)  
COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available)  
☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available)  
☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER <u>21887</u>	03 DISTANCE TO NEAREST DRINKING WATER WELL <u>on-site</u> (mi)			
04 DEPTH TO GROUNDWATER <u>35</u> (ft)	05 DIRECTION OF GROUNDWATER FLOW <u>SSW</u>	06 DEPTH TO AQUIFER OF CONCERN <u>5</u> (ft)	07 POTENTIAL YIELD OF AQUIFER <u>unknown</u> (gpd)	08 SOLE SOURCE AQUIFER <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

09 DESCRIPTION OF WELLS (including usage, depth, and location relative to population and buildings)

See Appendix G

10 RECHARGE AREA

☒ YES COMMENTS  
☐ NO

11 DISCHARGE AREA

☒ YES COMMENTS  
☐ NO

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☒ A. RESERVOIR, RECREATION DRINKING WATER SOURCE  
☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES  
☐ C. COMMERCIAL, INDUSTRIAL  
☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
<u>Rock River</u>	<input type="checkbox"/>	<u>0.001</u> (mi)
	<input type="checkbox"/>	(mi)
	<input type="checkbox"/>	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. <u>1477</u> NO. OF PERSONS	B. <u>3433</u> NO. OF PERSONS	C. <u>7544</u> NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION

0.001 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE

unknown

04 DISTANCE TO NEAREST OFF-SITE BUILDING

0.001 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

Densely populated subdivisions, with agricultural areas on the outer edges





POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
IL D 984836734

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A.  $10^{-6} - 10^{-8}$  cm/sec ☐ B.  $10^{-4} - 10^{-6}$  cm/sec ☒ C.  $10^{-4} - 10^{-3}$  cm/sec ☐ D. GREATER THAN  $10^{-3}$  cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than  $10^{-8}$  cm/sec) ☐ B. RELATIVELY IMPERMEABLE ( $10^{-4} - 10^{-6}$  cm/sec) ☒ C. RELATIVELY PERMEABLE ( $10^{-2} - 10^{-4}$  cm/sec) ☐ D. VERY PERMEABLE (Greater than  $10^{-2}$  cm/sec)

03 DEPTH TO BEDROCK

250 (ft)

04 DEPTH OF CONTAMINATED SOIL ZONE

Unknown (ft)

05 SOIL pH

unknown

06 NET PRECIPITATION

4.0 (in)

07 ONE YEAR 24 HOUR RAINFALL

2.75 (in)

08 SLOPE  
SITE SLOPE

0 %

DIRECTION OF SITE SLOPE

unknown

TERRAIN AVERAGE SLOPE

0 %

09 FLOOD POTENTIAL

SITE IS IN NA YEAR FLOODPLAIN

10

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE

OTHER

A. NA (mi)

B. 0.25 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

NA (mi)

ENDANGERED SPECIES:

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL

RESIDENTIAL AREAS: NATIONAL/STATE PARKS,  
FORESTS, OR WILDLIFE RESERVES

AGRICULTURAL LANDS  
PRIME AG LAND AG LAND

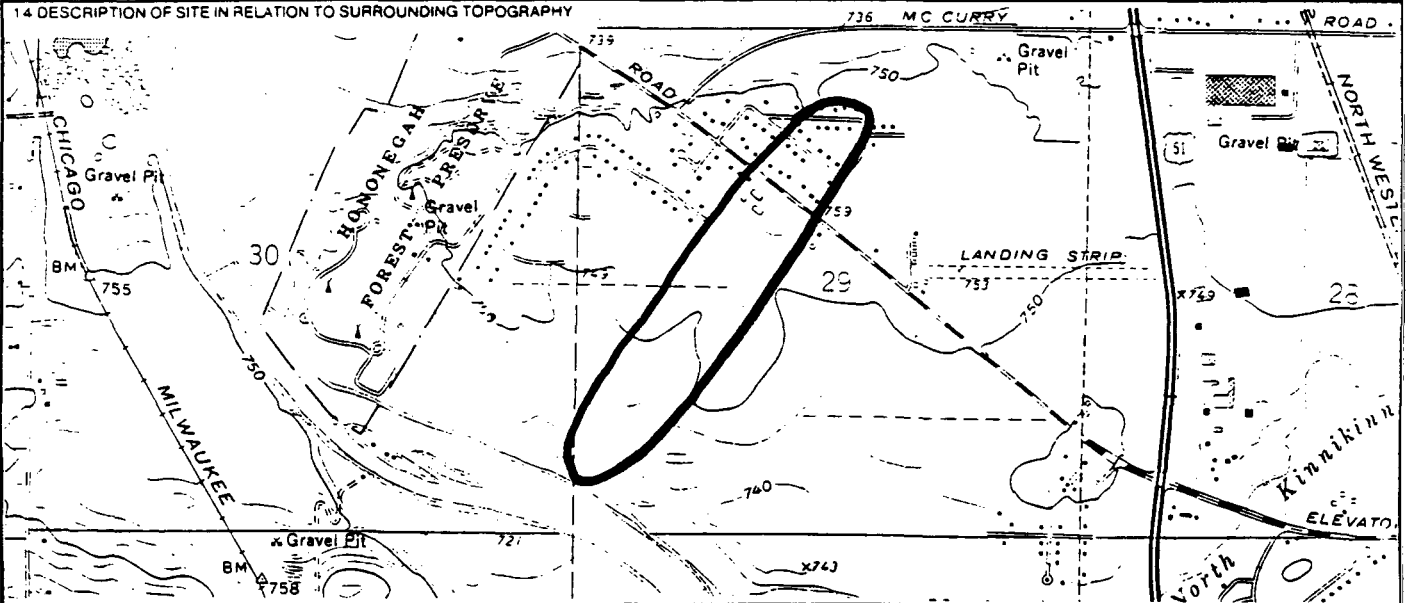
A. 0.50 (mi)

B. 0.001 (mi)

C. 0.001 (mi)

D. 0.001 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY



VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

USGS Topographic Maps  
IEPA Land Files



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
IL D 984836734

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	4	U.S. EPA Central Regional Lab Chicago, IL	
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER Soil Gas	39	U.S. EPA Central Regional Lab Chicago, IL	

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Water level	

IV. PHOTOGRAPHS AND MAPS

01 TYPE <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> AERIAL	02 IN CUSTODY OF <u>Illinois EPA</u> <small>(Name of organization or individual)</small>
03 MAPS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	04 LOCATION OF MAPS <u>Illinois EPA Springfield, IL</u>

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Illinois EPA Files  
SSI conducted June 1-4, 1992 and August 10-15, 1992



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
JL 0 984836734

II. CURRENT OWNER(S)				PARENT COMPANY (If applicable)			
01 NAME NA		02 D+B NUMBER		08 NAME		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER		08 NAME		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER		08 NAME		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER		08 NAME		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
III. PREVIOUS OWNER(S) (List most recent first)				IV. REALTY OWNER(S) (If applicable; list most recent first)			
01 NAME NA		02 D+B NUMBER		01 NAME		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	05 CITY		06 STATE	07 ZIP CODE
01 NAME		02 D+B NUMBER		01 NAME		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	05 CITY		06 STATE	07 ZIP CODE
01 NAME		02 D+B NUMBER		01 NAME		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	05 CITY		06 STATE	07 ZIP CODE
V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)							
IEPA Land Files							



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
IL D984836734

II. CURRENT OPERATOR (Provide if different from owner)

OPERATOR'S PARENT COMPANY (If applicable)

01 NAME NA		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER					

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

01 NAME NA		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					

01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					

01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

IEPA Land Files



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
JL D 984836734

II. ON-SITE GENERATOR

01 NAME NA	02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	
05 CITY	06 STATE 07 ZIP CODE	

III. OFF-SITE GENERATOR(S)

01 NAME NA	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME NA	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

IEPA Land Files



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
IL D 984836734

II. PAST RESPONSE ACTIVITIES

01 <input type="checkbox"/> A. WATER SUPPLY CLOSED 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
NA		
01 <input type="checkbox"/> B. TEMPORARY WATER SUPPLY PROVIDED 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> C. PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> D. SPILLED MATERIAL REMOVED 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> F. WASTE REPACKAGED 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> G. WASTE DISPOSED ELSEWHERE 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> H. ON SITE BURIAL 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> L. ENCAPSULATION 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> N. CUTOFF WALLS 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> O. EMERGENCY DIKING/SURFACE WATER DIVERSION 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> P. CUTOFF TRENCHES/SUMP 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input checked="" type="checkbox"/> Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION	02 DATE _____	03 AGENCY _____



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

IL D 984836734

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

NA

01 ☐ S. CAPPING/COVERING  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ T. BULK TANKAGE REPAIRED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ U. GROUT CURTAIN CONSTRUCTED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ V. BOTTOM SEALED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ W. GAS CONTROL  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ X. FIRE CONTROL  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ Y. LEACHATE TREATMENT  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ Z. AREA EVACUATED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ 1. ACCESS TO SITE RESTRICTED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ 2. POPULATION RELOCATED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ 3. OTHER REMEDIAL ACTIVITIES  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

III. SOURCES OF INFORMATION (Cite specific references, e.g., State files, sample analysis, reports)

IEPA Land Files



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D 984836734

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA Land Files



**APPENDIX D**

**SCREENING SITE INSPECTION PHOTOGRAPHS**

**APPENDIX E**

**JUNE 1-4, 1992 SOIL GAS SURVEY REPORT**

SOIL-GAS SURVEY REPORT FOR THE EVERGREEN MANOR SUBDIVISION,  
ROSCOE, ILLINOIS - JUNE, 1992

by

Lockheed Engineering and Sciences Company  
Environmental Services Assistance Team, Field Analytical Support Program  
536 South Clark Street  
Chicago, Illinois 60605

for

United States Environmental Protection Agency  
Region V  
77 West Jackson  
Chicago, Illinois 60605

Submitted June, 1992

Contract 68-D1-0158

RECEIVED

JUL 06 1992

IEPA/DLPC

#### ACKNOWLEDGEMENTS

This report is the result of an effort by the Lockheed Engineering and Sciences Company Field Analytical Support Program in conjunction with the US EPA. Major contributors were Steve Peterson of the US EPA, Mel Kaminsky (field chemist), Denise Goddard and Pat Scott (analysis), Gary Hochgraf (hydrogeologist) and Steve Schroedl (geologist). Questions about the report should be directed to Steve Schroedl at 312-886-2915.

#### NOTICE

This technical assistance report has undergone a technical and/or quality assurance review within Lockheed personnel. It is for internal Environmental Protection Agency use only. Distribution, application, and use of the data contained herein are at the discretion of Regional personnel.

## INTRODUCTION

A soil-gas survey was conducted June 1 to June 4, 1992 in the vicinity of McCurry Road and State Highway 251 (formerly Highway 51) in Roscoe, Illinois under a joint effort between the US EPA Region V and the Illinois Environmental Protection Agency (IEPA). The objective of the survey was to use soil-gas sampling and analysis to clarify the source or sources of volatile organic compounds in residential wells located in the Evergreen Manor subdivision.

Soil-gas grab samples were collected at 16 locations around the indicated area. Each location was sampled at the greatest depth attainable while not penetrating the saturated zone. The soil-gas samples were returned to the Environmental Services Assistant Team (ESAT) Field Analytical Support Program's (FASP) laboratory for rapid (24-hour) turnaround VOA analysis.

## BACKGROUND

The contamination condition at Evergreen Manor Subdivision was initially discovered in 1990 when an analysis of a property's residential well was required by a lending institution. The resulting analysis indicated elevated levels of volatile organic compounds (VOCs) in the groundwater, thereby prompting the Illinois Department of Public Health (IDPH) to sample additional wells in the subdivision. Currently, the IDPH has sampled over 190 wells in the subdivision and found the following compounds at the indicated maximum concentrations: trichloroethylene (90 ppb), tetrachloroethylene (5.8 ppb), 1,1-dichloroethene (7.2 ppb), 1,1,1-trichloroethane (57.5 ppb), cis-1,2-dichloroethene (10.9 ppb), 1,1-dichloroethane (12.9 ppb), and 1,1,2-trichloroethane (0.5 ppb). In general, the compounds exhibit a plume with maximum contaminant concentrations along Blue Spruce Road that decrease in concentration to non-detect to the northwest and the southeast. Ground-water flows from the north-northeast to the south-southwest (Figure 1)<sup>1</sup>.

A similar contamination condition but with higher concentrations was identified by the IEPA south and east of Evergreen Manor at the Hononagah Heights subdivision. According to the IEPA information, a well-defined, seemingly confined plume of VOCs was found in residential wells; the extrapolation of the plume axis by the IEPA indicated that Warner Electric Brake and Clutch at the southeast corner of McCurry and Highway 251 may be the source. Currently, the subdivision uses municipal water and a pump-and-treat station near the Rock River has been constructed. The seemingly linear confinement of the Hononagah Heights plume, the homogeneity and transmissivity of the aquifer, and the fact that residential well sampling between the two affected areas produce non-detect VOC concentrations leads to the possibility of separate contaminant sources.

This soil-gas survey was conducted to identify potential sources of groundwater contamination. The soil-gas survey utilized 16 sample locations with one co-located sample collected as 3A at location 1C (Figure 2). Ground-water was located at a depth of approximately 38 feet below ground surface.

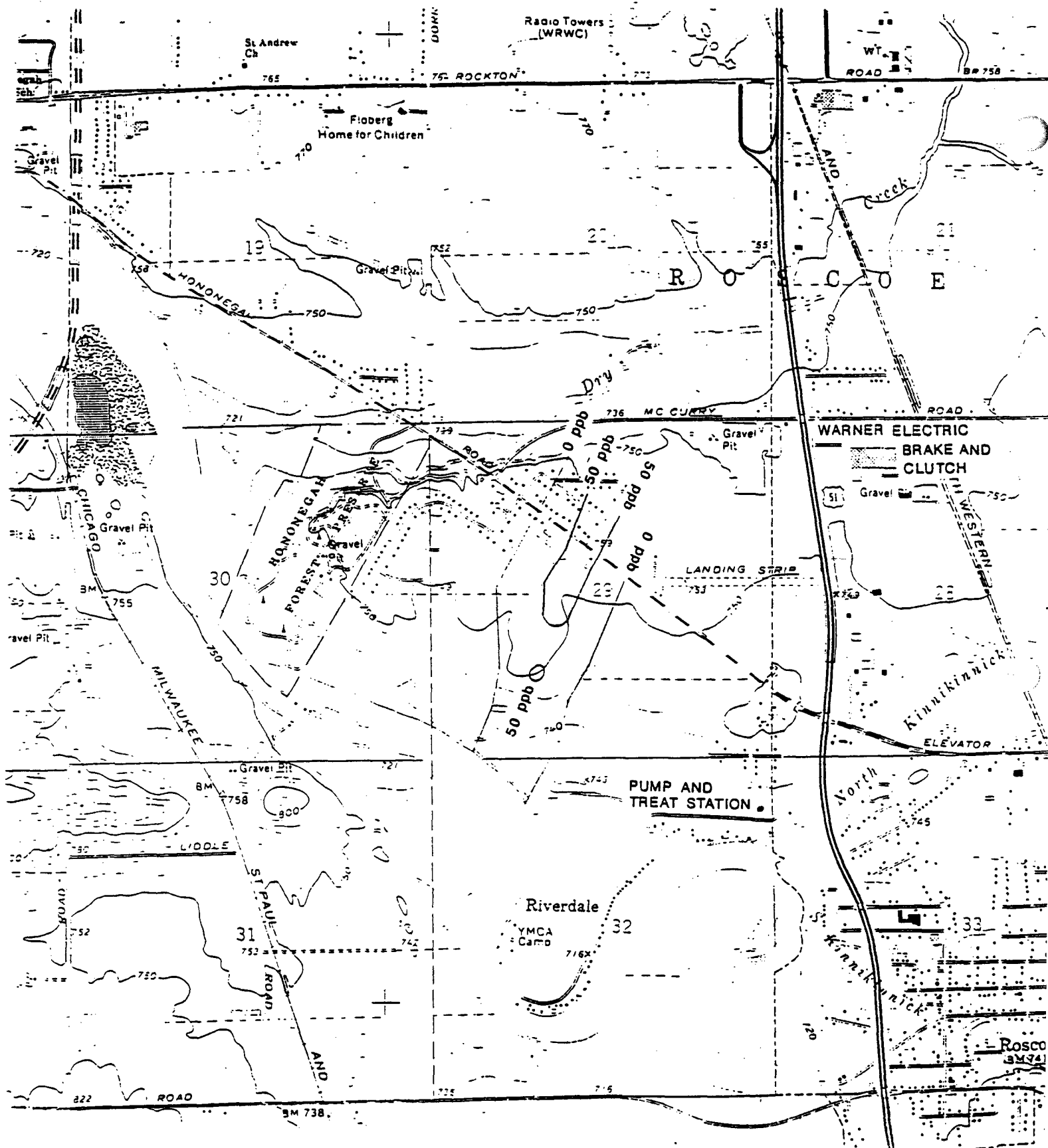


Figure 1. Site map<sup>2</sup>. Note contours of "CE" contamination in Evergreen Manor as reported by the IEPA<sup>1</sup>.

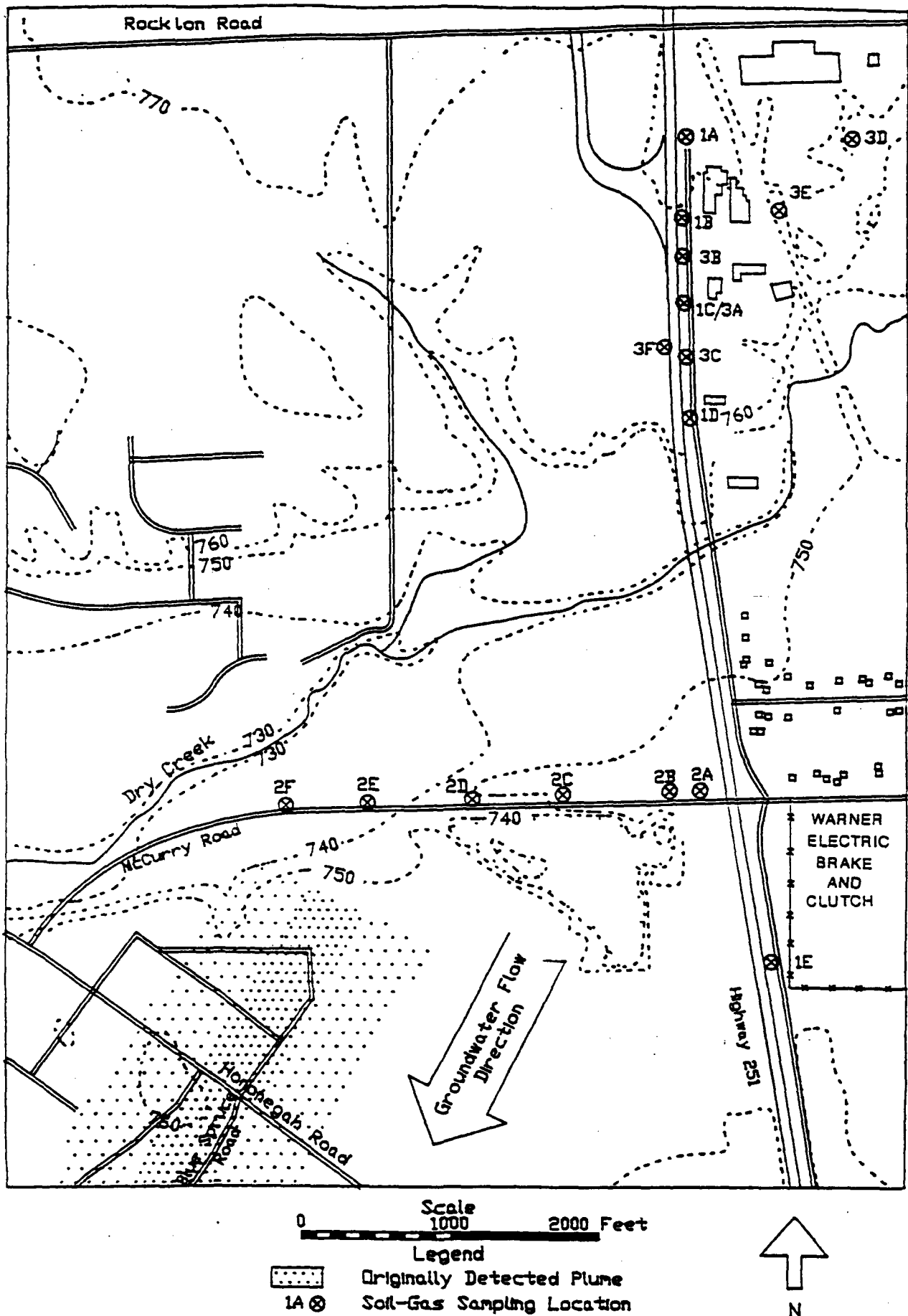


Figure 2. Soil-gas sampling locations and ground-water plume originally detected by IEPA residential-well sampling.

## SOIL-GAS SAMPLING, ANALYSIS, AND QA/QC PROCEDURES

Soil-gas samples were collected using a commercially-available hydraulic probe driving system known as a Geoprobe (Geoprobe, Salina, Kansas). The Geoprobe is capable of driving a 1" OD by 0.5" ID steel probe sectioned into 36" lengths. The tip of the probe consists of a leave-behind point that requires the probe to be pulled back 12 inches after reaching the desired sampling depth. Once the probe is pulled back and ready for soil-gas sampling, a length of 1/4" OD by 1/8" ID Teflon tube with a threaded fitting is lowered into the probe. With the fitting contacting the bottom of the probe, the Teflon tubing is twisted to cause the fitting to thread into the probe bottom. With the connection between the probe bottom and the tubing completed, the Teflon tubing is purged with one liter (three well volumes) of soil gas using a vacuum pump.

Soil-gas samples were collected in a 7" long by 1/4" OD stainless steel tube filled with activated charcoal and carbon molecular sieve (Supelco, cat. no. 2-0370M). The sampling method required that the tube be put in line with the sampling line emerging from the probe and drawing 6 liters of soil gas through the tube. The activated charcoal retained the vapor-phase VOCs and provided stable and rugged sample containment and lowered the detection limit by utilizing a large sample size. The sample tubes were taken to the FASP analytical laboratory and analyzed by first thermally desorbing the tube and then injecting the tube's contents into a gas chromatograph (Varian 3400) with an electrolytic conductivity detector (ELCD).

Quality assurance and quality control (QA/QC) procedures specified in the FASP soil-gas sampling and VOA analysis standard operating procedures were followed.

## RESULTS AND DISCUSSION

Soil-gas concentrations and depths for each sampling location are shown in Table 1. Only the chlorinated volatile organic compounds of 1,1,1-trichloroethane (TCA), trichloroethene (TCE), and 1,1-Dichloroethene (DCE) were detected in the samples. Since soil-gas sampling and analysis is an indirect detection method, order-of-magnitude changes in concentrations should be the focus rather than the actual concentration detected.

### 1,1,1-Trichloroethane

The concentrations of TCA measured ranged from nondetect to a maximum of 0.05 ug/l, with the majority of the sample locations in the  $10^{-2}$  to  $10^{-3}$  ug/l TCA range (Figure 3). The TCA concentrations at sample locations along the service road had a maximum at location 1C/3A with decreasing concentrations to the north (1A, 1B, 3B) and south (1D, 3C). TCA concentrations at sample locations along McCurry Road ranged from  $10^{-2}$  to  $10^{-3}$  ug/l. Location 3D was found to be nondetect while 3E was found to have a low concentration ( $10^{-4}$  ug/l). The TCA concentration at location 3F was found to be  $10^{-3}$  ug/l, similar to concentrations found upgradient along the service road.



SAMPLE NUMBER	DEPTH SAMPLED (ft)	CONCENTRATION (in ug/l)		
		<u>TCA</u>	<u>TCE</u>	<u>DCE</u>
1A	38	0.0022F <sup>1</sup>	0.001F	ND <sup>2</sup> F
1B	38	0.0017F	0.0005F	ND F
1C	35	0.04F	ND F	ND F
1D	35	0.0027F	ND F	ND F
1E	26	0.0003F	0.0002F	ND F
2A	21	0.0011F	0.0067F	0.047F
2B	11	0.012F	0.005F	0.42F
2C	19	0.005F	0.0017F	0.006F
2D	17	0.012F	0.0011F	0.0068F
2E	12	0.0022F	0.0063F	ND F
2F	7	0.003F	ND F	ND F
3A	12	0.05F	0.002F	ND F
3B	12	ND F	ND F	ND F
3C	32	ND F	0.0033F	ND F
3D	11	ND F	ND F	ND F
3E	7	0.0005F	ND F	ND F
3F	9	0.006F	ND F	ND F

<sup>1</sup> F = Flag indicating data have been generated using FASP methodologies. Hence, the analytes are tentatively identified and concentrations are quantitative estimates.

<sup>2</sup> ND = Non-detect concentration

Table 1. Soil-gas sampling locations and detected concentrations.

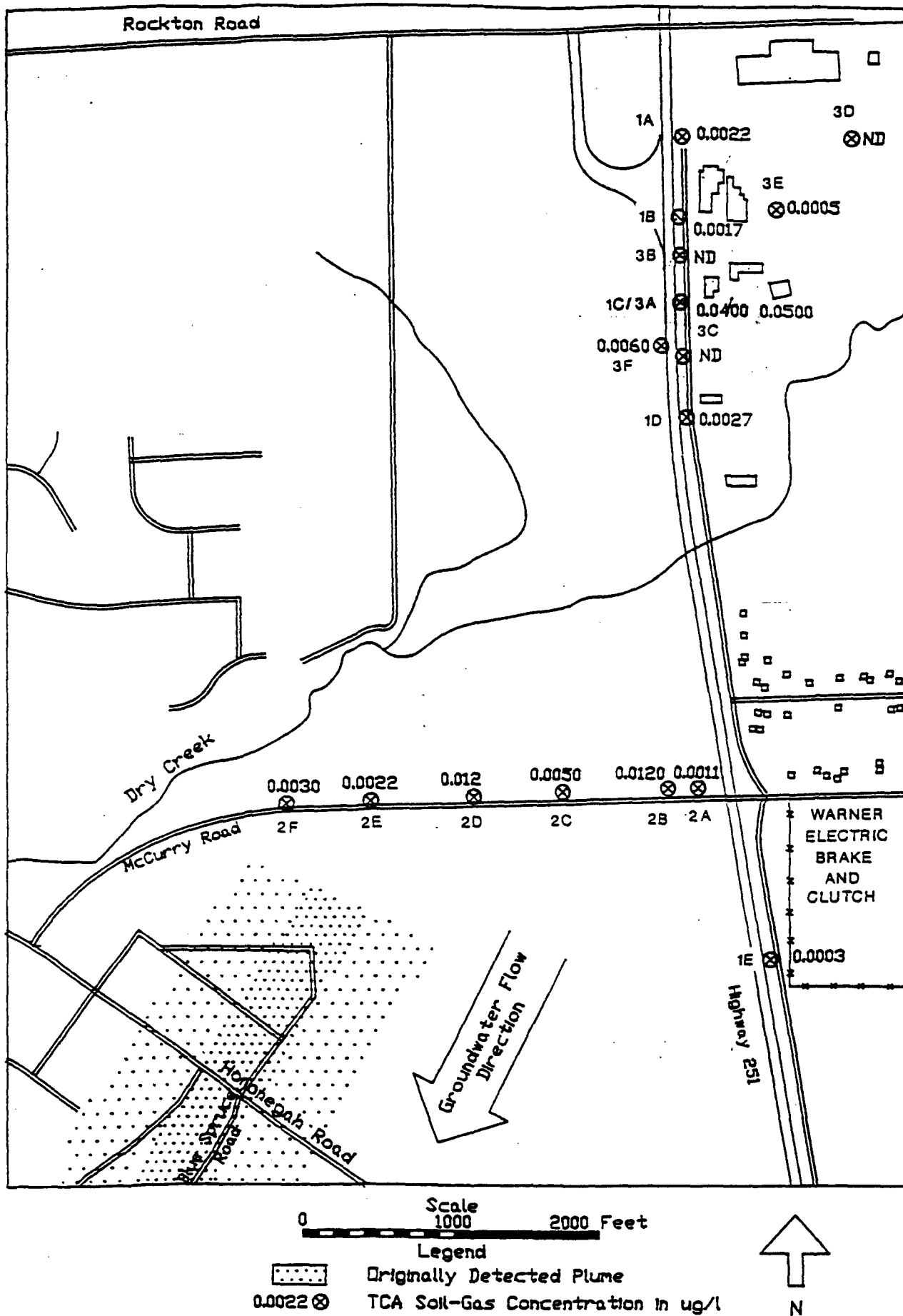


Figure 3. 1,1,1-Trichloroethane soil-gas concentrations.

### Trichloroethene

Although TCE was detected as often as TCA, the relationship between the concentrations and the sample locations is less consistent (Figure 4). The concentrations of TCE along the service road ranged from nondetect to a maximum of  $10^{-3}$  ug/l at location 1A. The McCurry Road sample location concentrations remained relatively constant at  $10^{-3}$  ug/l, with sample location 2F showing a non-detectable concentration. The remaining locations of 3D, 3E, and 3F showed non-detectable concentrations of TCE.

### 1,1-Dichloroethene

DCE was found only in samples collected along McCurry Road (Figure 5). The soil-gas concentrations ranged from a high of 0.42 ug/l at location 2B to  $< 10^{-2}$  ug/l at locations 2A, 2C and 2D. Locations 2E and 2F had non-detectable concentrations of DCE.

### CONCLUSIONS

The intent of this investigation was to assess the potential for upgradient sources of the contamination of the groundwater in Evergreen Manor. Using an approach based on the information and characteristics of the Warner Brake and Clutch site provided by the IEPA, the soil-gas sampling was conducted in areas of easiest access up gradient from Evergreen Manor that also maintained some degree of activity. The areas of investigation included sampling along the service road east of Highway 251 to investigate the light industry located there (locations 1A to 1E, 3A to 3C), sampling along McCurry road to determine the detectability of a plume generated along Highway 251 (locations 2A to 2F, 3F), and sampling upgradient of the industries located along Highway 251 (locations 3D and 3E).

Although the number of samples (16) collected was not sufficient to fully characterize the contamination plume identified by residential wells in Evergreen Manor, the samples did provide several important pieces of information:

- (i) The depths that the soil-gas samples were collected from and consequently the concentration profile of TCA along the service road indicates a ground-water concentration maximum at location 1C/3A. Lower soil-gas concentrations to the north and south of location 1C/3A (1A, 1B, 3B, 3C, and 1D) may result from lower concentrations of TCA in the ground-water or the spreading of TCA in the gas phase resulting from a high concentration of TCA in the groundwater at 1C/3A (i.e., a "halo").

The TCA soil-gas concentration profile along McCurry (locations 2A to 2F) shows only a broad TCA source indicative of ground-water contamination, with the east-west width of the profile resulting from the halo effect of gas-phase spreading of TCA from contaminated groundwater. Although the TCA concentrations at 2B and 2D are similar to

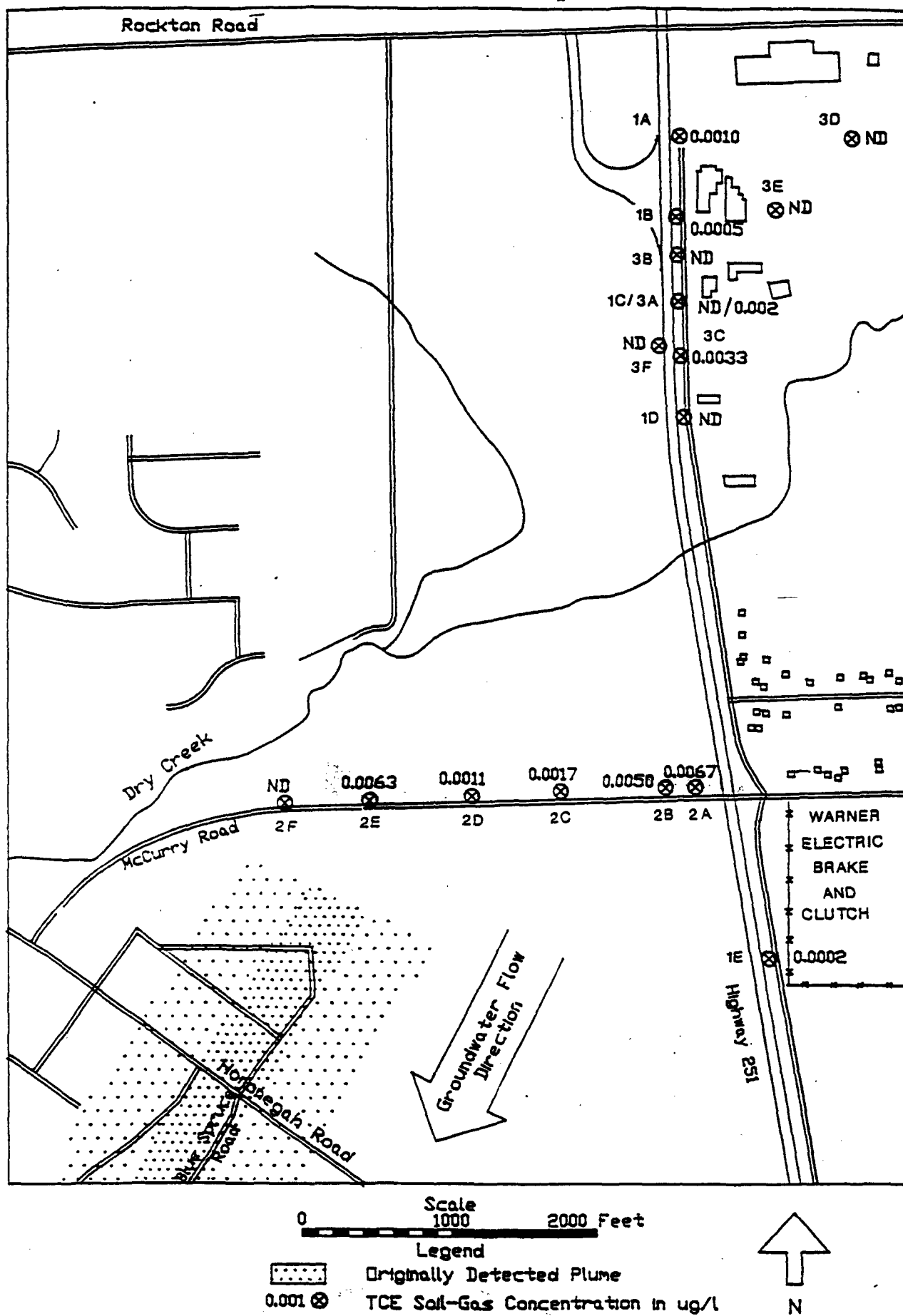


Figure 4. Trichloroethene soil-gas concentrations.



the TCA concentration at 1C, the existence of a lower concentration at location 3F indicates separation between the contamination found at 1C and that found at 2B and 2D.

- (ii) The limited data collected at locations 1D and 1E indicate non-detectable groundwater contamination near location 1D and low concentration ground-water contamination or halo effect concentrations of TCA at location 1E.
- (iii) The degradation/decomposition series of TCA can result in DCE and/or TCE<sup>3</sup>. Hence, the presence of TCE at lower concentrations alongside TCA may be attributed to degradation as opposed to contamination by TCE. The presence of DCE at sample locations 2A to 2E is generally low enough to be related to TCA degradation; the DCE concentration at location 2B is considerably larger than would be expected of degradation, therefore, a DCE source unrelated to the TCA source may exist.
- (iv) The concentrations of TCA and TCE at location 1E are similar to those found along McCurry Road at locations 2A to 2F. Because of this similarity and the lack of additional data, the contamination affiliated with Warner Electrical Clutch and Brake and that found along McCurry Road cannot be determined to be either separate plumes or an extension of a single plume.

Utilizing these conclusions and considering the overall low soil-gas concentrations detected, two scenarios with recommendations are presented:

- (i) The properties of chlorinated solvents cause the solvents to sink through groundwater in bulk and cause ground-water contamination only as a result of dissolution<sup>4</sup>. If in fact one or more of the industrial facilities is currently releasing solvents into the groundwater, the solvents may be passing through the groundwater and the concentrations in the upper portion of the aquifer (which would be the source for the soil gas) may be too low to provide a soil-gas signal representative of the situation. If current contaminant releases by the industries is the target concern, shallower (10 to 15 feet) soil-gas sampling at a 50-foot interval as near to the industrial facilities as possible could indicate the soil contamination resulting from the source.
- (ii) The low soil-gas concentrations may also indicate residual low-concentration ground-water contamination from a previous, non-active source or sources. In view of this scenario, the ground-water concentrations of solvents as seen at Evergreen Manor may not change greatly and quarterly monitoring of residential wells across the plume may indicate the presence or absence of an active contamination source.

## REFERENCES

- <sup>1</sup> Site Inspection Work Plan for Evergreen Manor, 1992. Pre-Remedial Unit: Bureau of Land; Illinois Environmental Protection Agency, Springfield, IL.
- <sup>2</sup> South Beloit Illinois-Wisconsin Quadrangle, USGS. 1976.
- <sup>3</sup> Kobayashi, H. and B.E Rittman, "Microbial Removal of Hazardous Organic Compounds". Environmental Science and Technology, 16:1982. pp 170A - 182A.
- <sup>4</sup> Schwille, F. 1988. Dense Chlorinated Solvents in Porous and Fractured Media: Model Experiments. Lewis Publishing.

**APPENDIX F**

**AUGUST 10-14, 1992 SOIL GAS SURVEY REPORT**



SOIL GAS SURVEY REPORT FOR THE EVERGREEN MANOR SUBDIVISION,  
ROSCOE, ILLINOIS - AUGUST, 1992

by

Lockheed Engineering and Sciences Company  
Environmental Services Assistance Team,  
Field Analytical Support Program  
536 South Clark Street  
Chicago, Illinois 60605

for

United States Environmental Protection Agency  
Region V  
77 West Jackson  
Chicago, Illinois 60604

Submitted September, 1992

Contract 68-D1-0158

RECEIVED  
SEP 17 1992  
IEPA/DLPC

#### ACKNOWLEDGEMENTS

This report is the result of an effort by the Lockheed Engineering and Sciences Company Environmental Services Assistance Team (ESAT) Field Analytical Support Program (FASP) in conjunction with the US EPA. Major contributors were Steven Peterson of the US EPA, Mel Kaminsky (field chemist), Denise Goddard and Pat Scott (analysis), Gary Hochgraf (hydrogeologist) and Steve Schroedl (geologist). Questions about the report should be directed to Steve Schroedl at 312-886-2915.

#### NOTICE

This technical assistance report has undergone a technical and/or quality assurance review within Lockheed ESAT personnel. It is for internal Environmental Protection Agency use only. Distribution, application, and use of the data contained herein are at the discretion of Regional personnel.

## NOTE

The following report describes a soil gas survey conducted August 10 through August 13, 1992 to provide additional analysis data to an original soil gas survey conducted in the same area from June 1 to June 4, 1992. This report has been prepared as an addendum to the original soil gas survey report which is included in Appendix A. Information regarding site background and soil gas sampling, analysis, and QA/QC can be found in Appendix A.

## INTRODUCTION

A soil gas survey was conducted in the vicinity of a light-industrial park located at the intersection of Rockton Road and Illinois State Highway 251 (formerly Highway 51 as indicated in Figure 1) north of Roscoe, Illinois (Figure 1). The joint effort between the US EPA Region V and the Illinois EPA consisted of 17 sample locations (locations 4A to 4G, 5A to 5D, and 6A to 6F) targeting areas along Rockton Road east of 251, along 251 south of Rockton Road, and along 251 south of McCurry Road (Figure 2). Soil gas samples were collected at all 17 locations and groundwater samples were collected at four of the locations (4B, 5A, 5B, and 5D). The samples were returned to the Environmental Services Assistance Team (ESAT) Field Analytical Support Program's (FASP) laboratory for rapid (24-hour) turnaround volatile organic compound analysis.

## SOIL GAS AND GROUNDWATER SAMPLING, ANALYSIS, AND QA/QC

Soil gas and ground water samples were collected utilizing the US EPA's Geoprobe. The soil gas samples were collected from depths determined to be in the vadose zone near the capillary fringe of the ground water. The Geoprobe operation and soil gas sampling and collection method is described in Appendix A.

Groundwater samples were also collected using the Geoprobe. The 1" OD/0.5" ID probe sections were fitted with a slotted groundwater sampling tip which was driven to a depth approximately 3 feet below the expected groundwater level (the water level within the installed probe was checked using an electric water level meter). Because the depth to groundwater was too great for a peristaltic pump and a bailer would not travel the length of the probe due to bends in the probe, a method of pipetting the sample was used. To "pipet" the sample, a length of clean 3/16" ID teflon tubing was lowered down the probe into the water. A vacuum was applied to the tube with the Geoprobe's vacuum pump and groundwater was drawn up into the

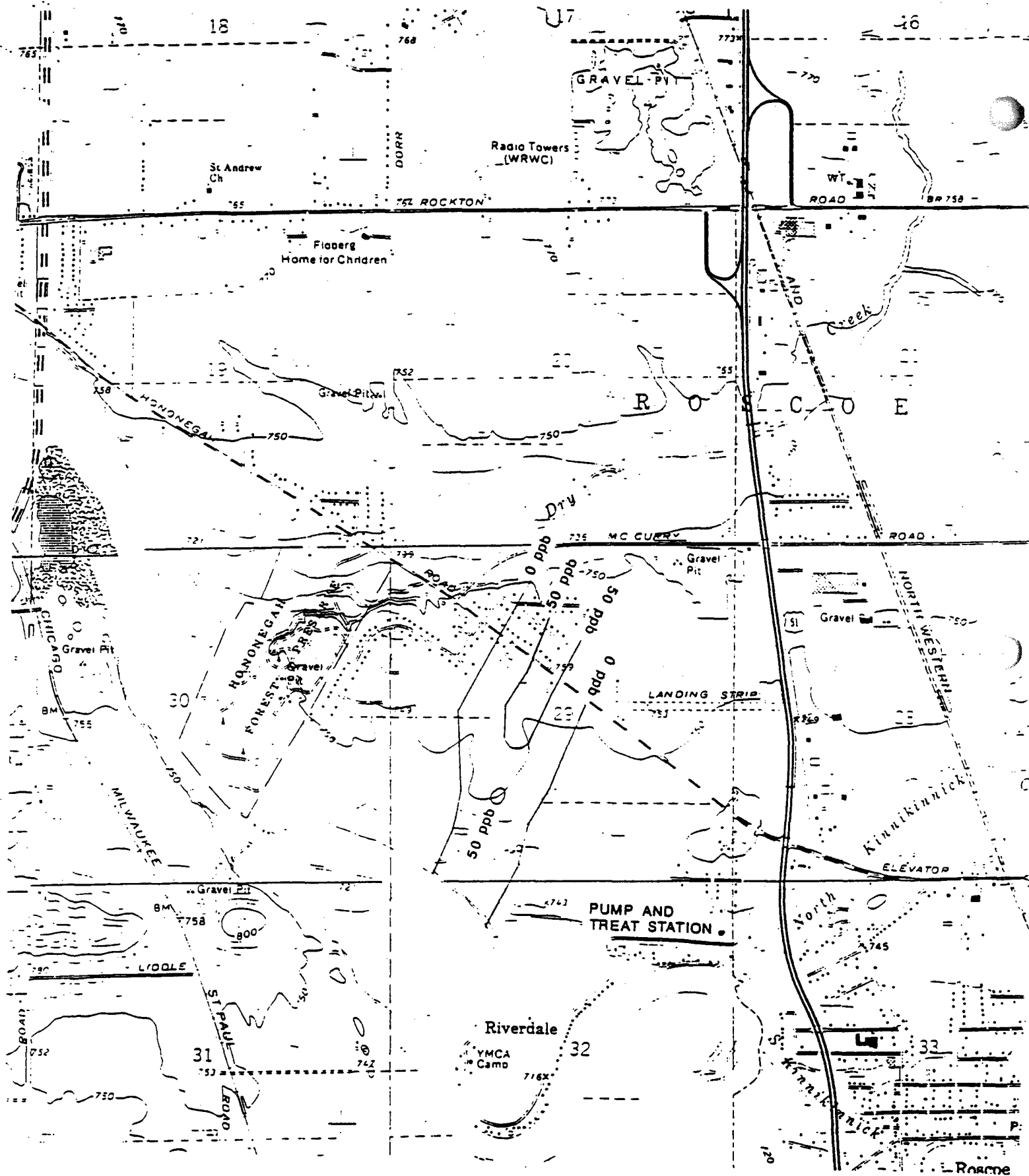


Figure 1. Site map<sup>1</sup>. Note contours of "CE" contamination in Evergreen Manor as reported by the IEPA<sup>2</sup>.

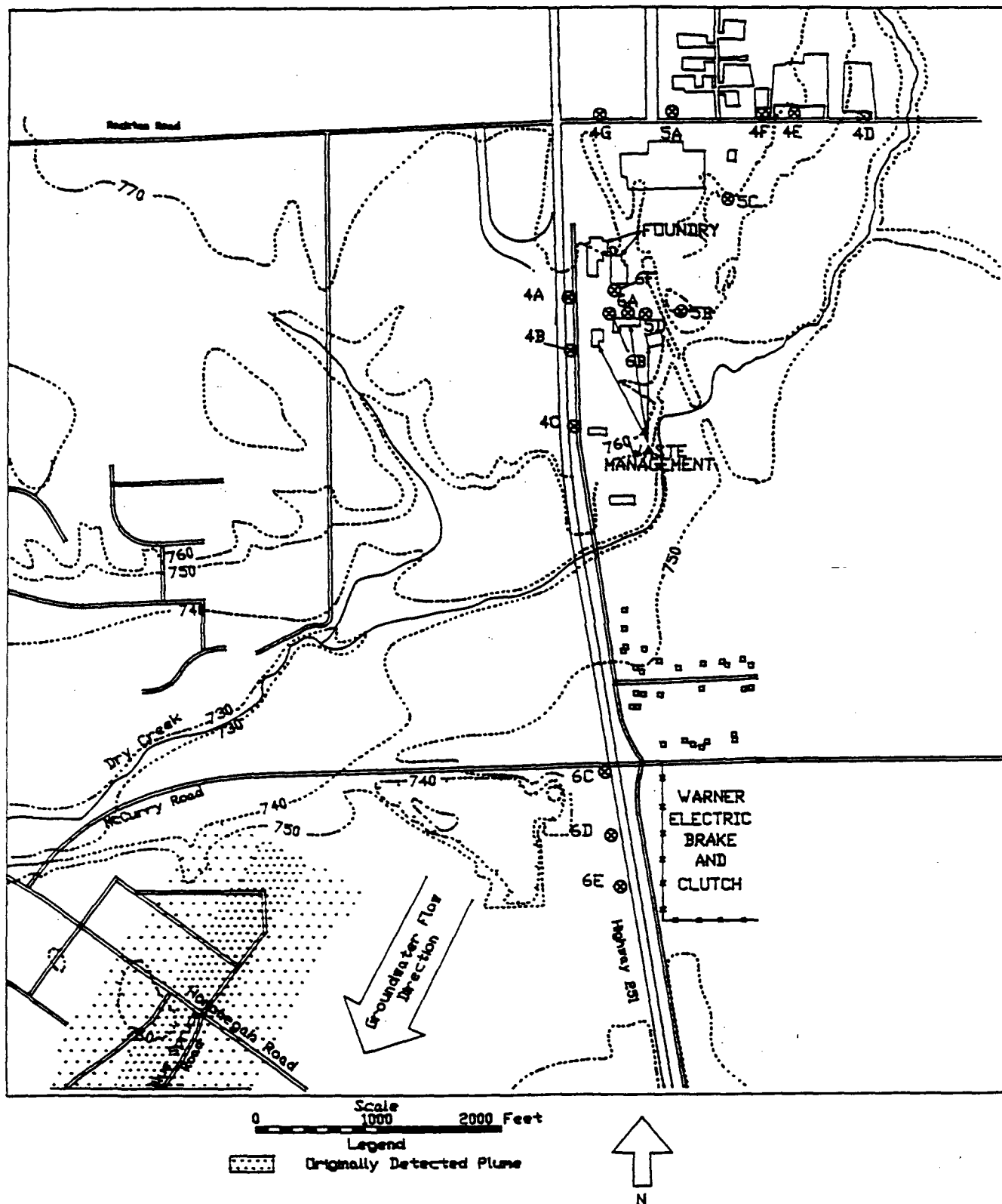


Figure 2. Soil gas sampling locations and groundwater contamination plume originally detected by IEPA residential-well sampling.

lower 10 feet of the tubing. With the groundwater held in the tubing by the vacuum, the tubing was clamped and pulled up to the surface. The vacuum was then released and the groundwater flowed out of the tubing and was collected in duplicate 22 ml vials.

Groundwater samples were placed on ice and returned to the EPA Central Regional Laboratory for analysis by gas chromatography/mass spectrometry. Quality assurance and quality control (QA/QC) procedures specified in the FASP soil gas and groundwater analysis standard operating procedures were followed.

## RESULTS AND DISCUSSION

### Soil Gas

Soil gas concentrations and depths for each sampling location are shown in Table 1 (note the sampling locations begin with 4A and end with 6F in order to be consecutive with the June sampling effort). Only the chlorinated volatile organic compounds of 1,1,1-trichloroethane (TCA), trichloroethene (TCE), and 1,1-dichloroethene (DCE) were detected in the samples. Since soil gas sampling and analysis is an indirect detection method, order-of-magnitude changes in concentrations should be the focus rather than the actual concentration detected.

### 1,1,1-Trichloroethane

The concentrations of TCA measured ranged from nondetect to a maximum of  $0.2 \mu\text{g/L}$  (Figure 3). The TCA concentrations detected north of the Waste Management facility and south of the foundry (locations 6A, 6B, and 6F) and at the south-west corner of McCurry Road and Highway 251 (location 6C) were of the same order of magnitude ( $10^{-1} \mu\text{g/L}$ ). A depth profile at location 6B displayed TCA concentrations increasing from nondetect at 6 feet to  $10^{-1} \mu\text{g/L}$  at sample depths of 12 to 36 feet. The remaining sample locations had non-detectable concentrations of TCA.

### Trichloroethene

TCE was detected at  $10^{-1} \mu\text{g/L}$  at location 6D along Highway 251 south of McCurry Road. The remaining sample locations were found to have non-detectable concentrations of TCE (Figure 4).

Table 1. Soil gas sampling locations and detected concentrations.

SAMPLE NUMBER	DEPTH SAMPLED (ft)	CONCENTRATION (in $\mu\text{g/L}$ )		
		<u>TCA</u>	<u>TCE</u>	<u>DCE</u>
4A	36	ND <sup>1</sup> F <sup>2</sup>	ND F	ND F
4B	36	ND F	ND F	ND F
4C	36	ND F	ND F	ND F
4D	12	ND F	ND F	ND F
4E	15	ND F	ND F	ND F
4F	15	ND F	ND F	ND F
4G	15	ND F	ND F	ND F
5A	15	ND F	ND F	ND F
5B	51	ND F	ND F	ND F
5C	36	ND F	ND F	ND F
5D	36	ND F	ND F	ND F
6A	36	0.03F	ND F	ND F
6B	6	ND F	ND F	ND F
6B	12	0.10F	ND F	ND F
6B	18	0.13F	ND F	ND F
6B	24	0.20F	ND F	ND F
6B	30	0.15F	ND F	ND F
6B	36	0.17F	ND F	ND F
6C	21	0.05F	ND F	ND F
6D	21	ND F	0.20F	ND F
6E	21	ND F	ND F	ND F
6F	36	0.12F	ND F	0.30 F

<sup>1</sup> ND = Non-detect concentration, minimum detection limit = 0.02  $\mu\text{g/L}$ .

<sup>2</sup> F = Flag indicating data have been generated using FASP methodologies. Hence, the analytes are tentatively identified and concentrations are quantitative estimates.

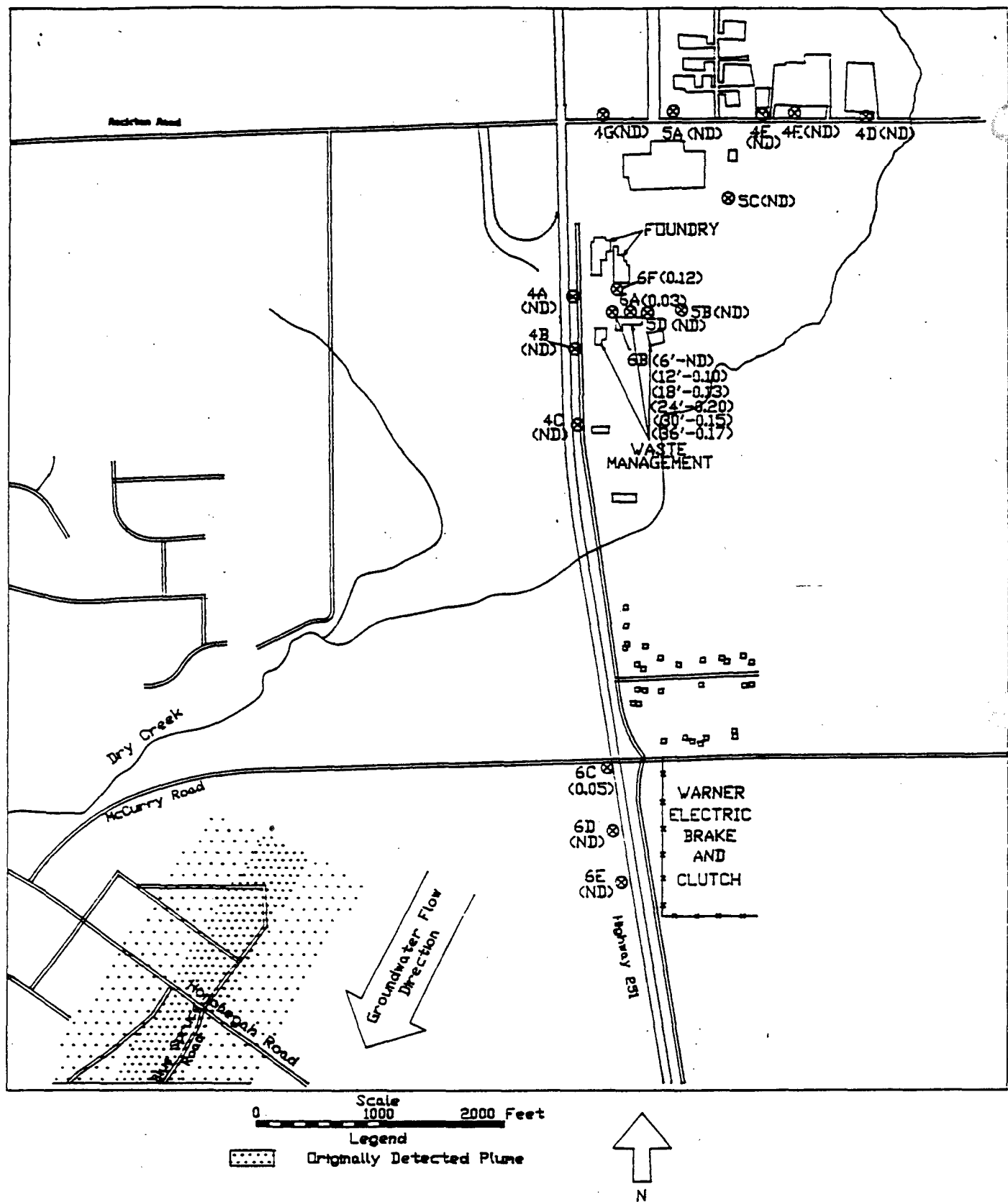


Figure 3. 1,1,1-Trichloroethane soil gas concentrations.



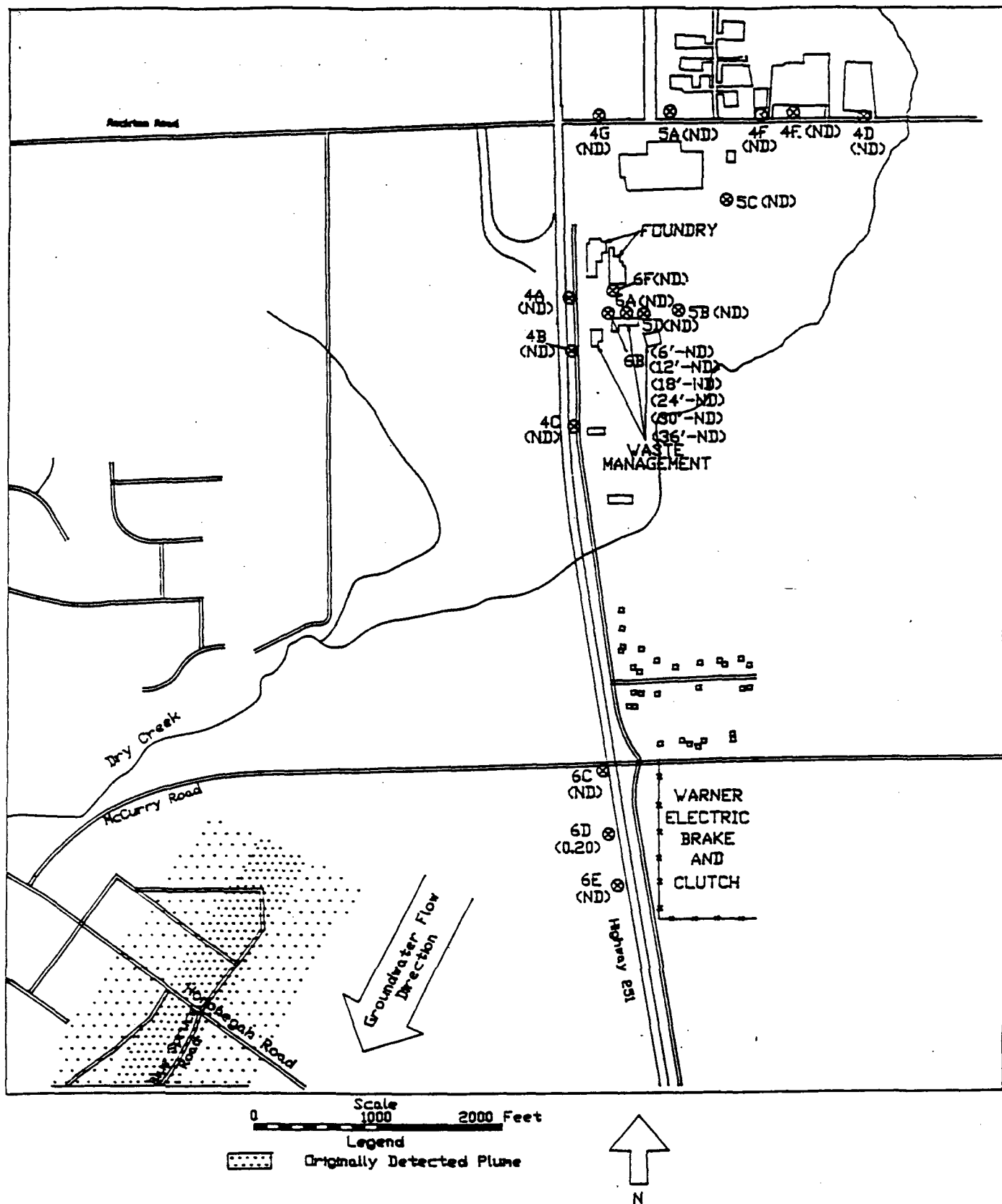


Figure 4. Trichloroethene soil gas concentrations.

### 1,1-Dichloroethene

DCE was found only at location 6F at  $10^{-1}$   $\mu\text{g/L}$ . The remaining sample locations were found to have non-detectable concentrations of DCE (Figure 5).

### Groundwater

Groundwater samples were collected at four locations (Figure 6). These groundwater samples reflect the water from the upper portion (approximately the top 3 feet) of the aquifer. Table 2 lists the compounds detected and their concentrations. TCA, TCE, and DCE were detected only at location 5D and at approximately the same concentration.

Methylene chloride and acetone were also detected in all samples, however, problems with laboratory contamination and low instrument sensitivity do not provide enough confidence in their values to report them.

Table 2. Groundwater sampling locations and detected concentrations.

<u>Sample</u>	(Concentration in $\mu\text{g/L}$ )		
	<u>TCA</u>	<u>TCE</u>	<u>DCE</u>
4B	ND <sup>1</sup> F <sup>2</sup>	ND F	ND F
5A	ND F	ND F	ND F
5B	ND F	ND F	ND F
5D	0.7 F	0.7 F	0.5 F

<sup>1</sup> ND = Non-detect concentration; minimum detection limit =  $0.1 \mu\text{g/L}$ .

<sup>2</sup> F = Qualifier indicating data have been generated using FASP methodologies. Hence, the analytes are tentatively identified and concentrations are quantitative estimates.

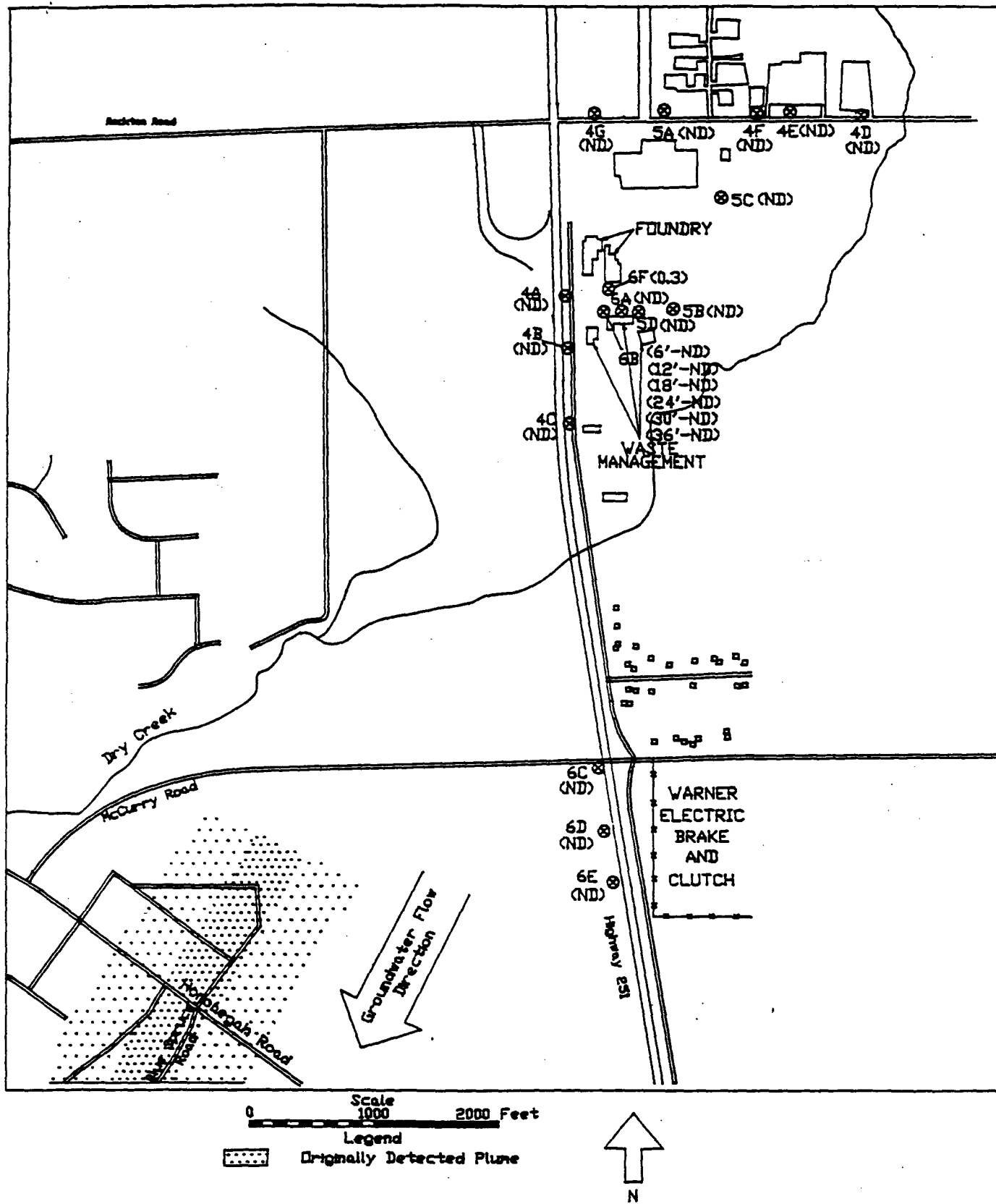


Figure 5. Dichloroethene soil gas concentrations.

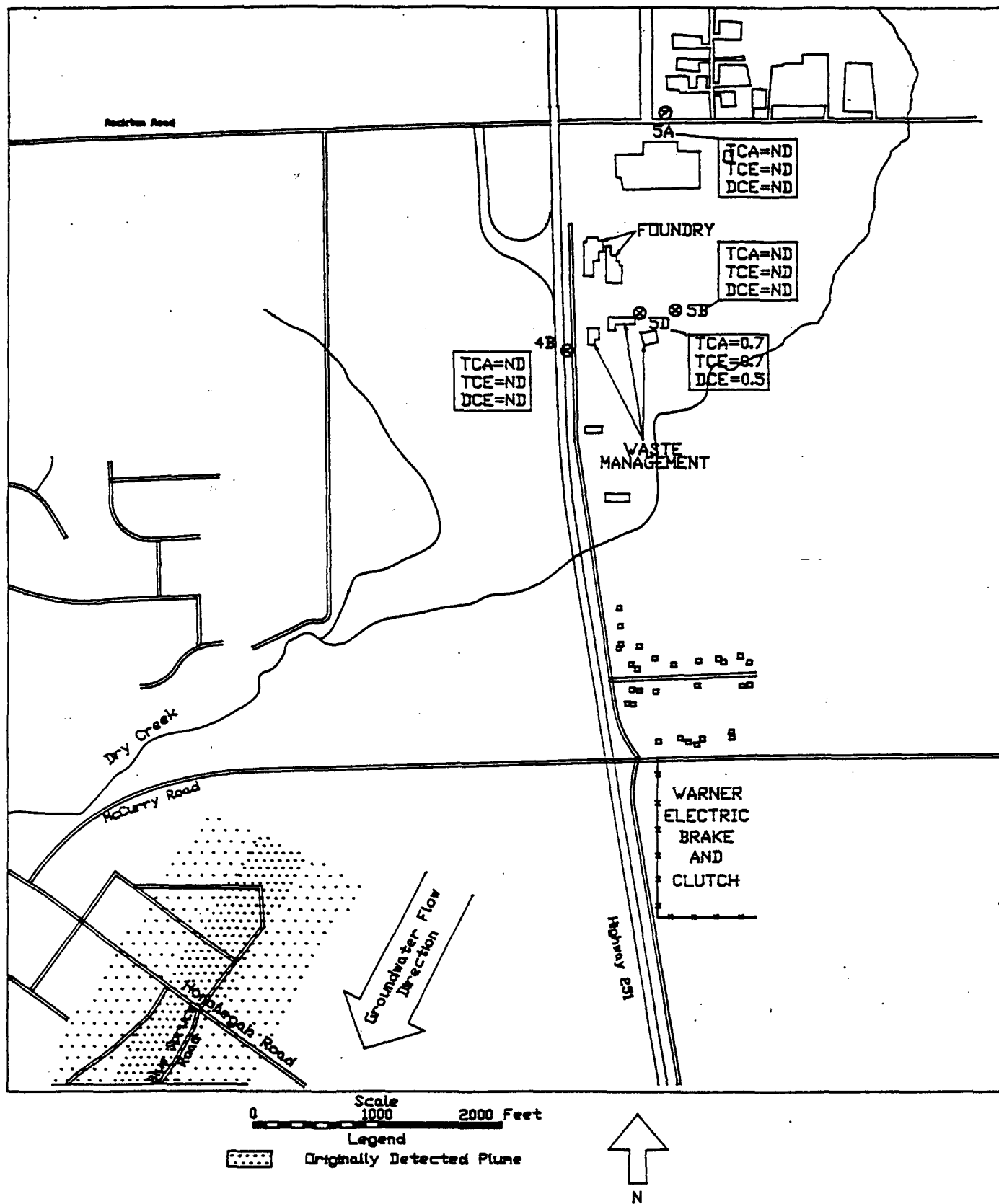


Figure 6. Groundwater sampling locations and concentrations.

## CONCLUSIONS

The intent of this survey was to investigate the potential for upgradient sources of the contamination of the groundwater in Evergreen Manor. Using an approach based on the information and characteristics of the Warner Brake and Clutch site provided by the IEPA and previous soil gas data, the soil gas and groundwater sampling was conducted to target specific areas of potential contamination. The areas of investigation included the following:

- (i) sampling along Rockton Road east of Highway 251 to investigate the light industry located to the north (locations 4D to 4G, 5A);
- (ii) sampling south of Rockton Road and east of the abandoned railroad (labeled as the Chicago and Northwestern Railroad in Figure 1) to investigate the light industry south of Rockton Road (locations 5B and 5C);
- (iii) sampling along Highway 251 south of Rockton Road and west of the abandoned railroad (locations 4A to 4C, 5D, 6A, 6B, and 6F) to further investigate the high soil gas concentrations detected in the area during the initial soil gas survey;
- (iv) sampling along Highway 251 south of McCurry Road to determine the potential for contribution from the original plume detected south of Warner Electric Brake and Clutch (6C to 6E); and
- (v) sampling groundwater from the upper portion of the aquifer to investigate the potential for low-concentration groundwater contamination.

The number of samples locations (17) and types of samples collected supplemented by the existing soil gas data provided the following information:

- (i) The detection of TCA in soil gas at locations 6A, 6B, and 6F, coupled with an increase in TCA concentration with depth at location 6B, and TCA in the groundwater at 5D indicates upper-aquifer groundwater contamination in the vicinity. The lack of TCA in the soil gas and groundwater at nearby location 4B indicates that the source affiliated with the upper-aquifer contamination is near the sample locations of 6A, 6B, and 6F. Age and strength of the source cannot be inferred from this data.
- (ii) Although methylene chloride and acetone were present in all of the water samples, groundwater contamination cannot be concluded. Both methylene chloride and acetone

are common laboratory contaminants and since the sampling and analytical methods were designed for FASP, the potential for high levels of laboratory contaminants exists. Also, methylene chloride and acetone were not target analytes and were not calibrated for and as a result, the concentration detected could only be estimated.

- (iii) Although TCA was detected in the soil gas at location 6C and TCE was detected in the soil gas at location 6D, location 6E proved to be clean. This occurrence of TCA and TCE at 6C and 6D does not provide sufficient evidence to infer a significant source of contamination from Warner Electric. Contamination seen in the soil gas from a source as distant as Warner Electric would be expected to be more consistent in its components and thus one might expect to see only one or both compounds at both locations as well as locations 2A and 2B from the previous survey (which contained TCA, TCE, and DCE). This occurrence of soil gas concentrations may be a result of local operations.

Using this information, two scenarios with recommendations are presented:

- (i) The soil gas and groundwater concentrations of TCA in the vicinity of sample locations 5D, 6A, 6B, and 6F indicates groundwater contamination. Since the health and safety of down-gradient recipients of the groundwater are the primary concern, a monitoring well located downgradient from this area would provide the data necessary to determine if the contamination is from an active source or an old, inactive source that may not produce future conditions worse than presently exist. The depths of the well screens in the residential wells should be considered in the placement of the well screens in the monitoring well due to the ability of the contaminants to pass through the groundwater independent of groundwater flow.
- (ii) The soil gas and groundwater concentrations may also indicate residual low-concentration groundwater contamination from a previous, non-active source or sources. In view of this scenario, the groundwater concentrations of solvents as seen at Evergreen Manor may not change greatly and regular monitoring of residential wells across the plume may indicate the presence or absence of an active contamination source.

#### REFERENCES

- <sup>1</sup> South Beloit Illinois-Wisconsin Quadrangle, USGS. 1976.
- <sup>2</sup> Site Inspection Work Plan for Evergreen Manor, 1992. Pre-Remedial Unit: Bureau of Land; Illinois Environmental Protection Agency, Springfield, Il.

**APPENDIX A**



**APPENDIX G**

**AREA WELL LOGS**

Well No. 2783

Owner's Name: Hononegah Estate Well #2

Address: 11770 Cedarbrook Roseme, IL

Location: Located in the NE Quarter of the NE Quarter of the SE Quarter of Section 29 of (T4N 2E) in Winnebago County.

Date: July 1989

Well Log: Rough Ref. # 1580

**Well**

Diameter: 12" casing

Depth: 780'

Cased to: 550'

**Water levels**

Static: 30'

Pumping: 130'

GPM: 400

Time: 12 hours

**Screen**

Type of: ROCK WELL

Length: \_\_\_\_\_

Diameter: \_\_\_\_\_

Slot: \_\_\_\_\_

Seal: \_\_\_\_\_

**Pump**

Size: \_\_\_\_\_

Type: \_\_\_\_\_

Make: \_\_\_\_\_

Setting: \_\_\_\_\_

**Pitless Unit:**

**Who did work:**

Permit No.: 111885

<u>top soil</u>	<u>0-3</u>
<u>brown sand &amp; gravel</u>	<u>3-29</u>
<u>gray sand &amp; gravel</u>	<u>29-127</u>
<u>sand &amp; gravel</u>	<u>127-157</u>
<u>sand &amp; gravel w/cobbles</u>	<u>157-192</u>
<u>gray clay</u>	<u>192-197</u>
<u>sand &amp; gravel</u>	<u>197-201</u>
<u>hard gray clay w/gravel strks</u>	<u>201-208</u>
<u>pink clay</u>	<u>208-212</u>
<u>gravel &amp; cobbles</u>	<u>212-250</u>
<u>sandstone</u>	<u>250-255</u>
<u>white cemented sandstone</u>	<u>255-275</u>
<u>red sandstone</u>	<u>275-292</u>
<u>red sandstone w/white sandstone &amp; red shale streaks</u>	<u>292-294</u>
<u>white limestone</u>	<u>294-308</u>

**Additional Comments**

18" grouted through drift to 255'

12" grouted into sandstone at 550'

11.5" hole 550'-780'

**RECEIVED**

**NOV 25 1991**

**IEPA/DLPC**

red sandstone w/red shale streaks	308-312
red sandstone w/some white limestone	312-313
hard red sandstone	313-316
white limestone	316-320
red sandstone w/white limestone streaks	320-335
white sandstone w/limestone & pink cherty strk	335-346
white limestone	346-350
gray shale	350-352
white/gray limestone	352-363
green limestone	363-372
green sandstone	372-379
green sandstone w/streaks of brown shale	379-382
brown sandstone & green sandstone streaks	382-386
brownish & red sandstone w/gray sandstone strk	386-396
red sandstone & red shale streaks	396-401
red & brown w/green shale streaks	401-403
red sandstone & red shale	403-404
red shale, gray shale w/red sandstone	404-406
red shale	406-408
red shale & redish brown sandstone	408-412
red shale & red and gray sandstone	412-423
black cemented sandstone	423-426
red & green shale	426-436
gray & green & brown sandstone	436-446
white sandstone w/green sandstone	446-447
white sandstone w/white limestone streaks	447-469
white sandstone w/streaks red cemented sandstone	469-480
white sandstone	480-535
red cemented sandstone	535-537
white sandstone	537-563
red cemented sandstone	563-565
red & gray shale	565-566
gray shale	566-571
green sandstone	571-573
gray shale	573-578
white sandstone (w/white chert or limestone)	578-584
white sandstone	584-586
pink sandstone	586-613
gray & green shale	613-620
red shale w/gray streaks	620-629
white cemented sandstone	629-630
hard & soft red & gray shale	630-635
streaks of light & dark sandstone	635-638
hard red cemented sandstone w/red shale streaks	638-640
red shale w/streaks of gray & green shale	640-649
hard cemented red & brown sandstone	649-650
red shale	650-664
greenish gray shale	664-670
hard green cemented sandstone w/silica sand	670-672
cemented white sandstone w/green shale streaks	672-674
cemented white sandstone w/black shale streaks	674-679
white sandstone	679-685
gray cemented sandstone	685-691
white sandstone w/some cemented streaks	691-753
gray cemented sandstone	753-762
white sandstone	762-780

Well No. 2769

Owner's Name: HONONEGAH COUNTRY ESTATE Well #1

Address: 11770 Cedarbrook Roseme, IL

Location: The Lot #52, in Moore Haven Subd., located in the SE Quarter  
of the SE Quarter of the SE Quarter of Section 29 of  
(46N 2E) in Winnebago County.

Date: July 1984

Well Log: Rough Ref. # 1520

Well	top soil	0-3
Diameter: 12" casing	brown sand & gravel	3-29
Depth: 780'	gray sand & gravel	29-127
Cased to: 550'	sand & gravel	127-157
Water levels	sand & gravel w/cobbles	157-192
Static: 30'	gray clay	192-197
Pumping: 130'	sand & gravel	197-201
GPM: 400	hard gray clay w/gravel streak	201-208
Time: 12 hours	pink clay	208-212
Screen	gravel & cobbles	212-250
Type of: ROCK WELL	sandstone	250-255
Length:	white cemented sandstone	255-275
Diameter:	red sandstone	275-292
Slot:	red sandstone w/white sandstone & red shale streaks	292-294
Seal:	white limestone	294-308
Pump	red sandstone w/red shale streaks	308-312

Size: Additional Comments

Type: 18" grouted through drift to 255'

Make: 12" grouted into sandstone at 550'

Setting: 11.5" hole 550'-780'

Pitless Unit:

Who did work:

Permit No.: 111883

red sandstone w/some white limestone	312-313
fine hard red sandstone	313-316
white limestone	316-320
red sandstone w/white limestone streaks	320-335
white sandstone w/limestone & pink cherty streaks	335-346
white limestone	346-350
gray shale	350-352
white gray limestone	352-363
green limestone	363-372
green sandstone	372-379
green sandstone w/streaks of brown shale	379-383
brown sandstone & green sandstone streaks	383-386
brownish & red sandstone w/gray sandstone streaks	386-396
red sandstone & red shale streaks	396-401
red & brown w/green shale streaks	401-403
red sandstone & red shale	403-404
red shale, gray shale w/red sandstone	404-406
red shale	406-408
red shale & redish brown sandstone	408-412
red shale & red and gray sandstone	412-423
black cemented sandstone	423-426
red & green shale	426-436
gray & green & brown sandstone	436-446
white sandstone w/green sandstone	446-447
white sandstone w/white limestone streaks	447-469
white sandstone w/streaks red cemented sandstone	469-480
white sandstone	480-535
red cemented sandstone	535-537
white sandstone	537-563
red cemented sandstone	563-565
red & gray shale	565-566
gray shale	566-571
green sandstone	571-573
gray shale	573-578
white sandstone (w/white chert or limestone chips)	578-584
white sandstone	584-586
pink sandstone	586-613
gray & green shale	613-620
red shale w/gray streaks	620-629
white cemented sandstone	629-630
hard & soft red & gray shale	630-635
streaks of light & dark sandstone	635-638
hard red cemented sandstone w/red shale streaks	638-640
red shale w/streaks of gray & green shale	640-649
hard cemented red & brown sandstone	649-650
red shale	650-664
greenish gray shale	664-670
hard green cemented sandstone w/silica sand	670-672
cemented white sandstone w/green shale streaks	672-674
cemented white sandstone w/black shale streaks	674-679
white sandstone	679-685
gray cemented sandstone	685-691
white sandstone w/some cemented streaks	691-753
gray cemented sandstone	753-762
white sandstone	762-789

1st Copy -  
Ill. Dept. of Public Health  
2nd Copy - Well Contractor  
3rd Copy - Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED. MAIL ORIGINAL TO STATE  
DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST  
JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER  
SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH  
WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam.  in. Depth  ft.  
Curb material  Buried Slab: Yes ☐ No ☐  
b. Driven ☐ Drive Pipe Diam.  in. Depth  ft.  
c. Drilled ☒ Finished in Drift ☒ In Rock ☐  
Tubular ☐ Gravel Packed ☐  
d. Grout:

(KIND)	FROM (FT.)	TO (FT.)

2. Distance to Nearest:

Building 18 Ft. Seepage Tile Field 100  
Cess Pool  Sewer (non Cast iron)   
Privy  Sewer (Cast iron) 100  
Septic Tank 75 Barnyard   
Leaching Pit  Manure Pile

3. Well furnishes water for human consumption? Yes ☒ No ☐

4. Date well completed 7-23-85

5. Permanent Pump Installed? Yes ☒ Date 7-23-85 No ☐

Manufacturer Red Jacket Type Sub Location F.H. 11  
Capacity 12 gpm. Depth of Setting 56 Ft.

6. Well Top Sealed? Yes ☒ No ☐ Type Martinsch

7. Pitless Adapter Installed? Yes ☒ No ☐

Manufacturer Martinsch Model Number BP10  
How attached to casing? Threaded nut

8. Well Disinfected? Yes ☒ No ☐

9. Pump and Equipment Disinfected? Yes ☒ No ☐

10. Pressure Tank Size 20 gal. Type Well x-tre  
Location In Basement

11. Water Sample Submitted? Yes ☒ No ☐

REMARKS:

County # 25827

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Tim Mc Donnell Well No.  

Address Betsy Ross Ln

Driller Jack Bull License No. 92-606

11. Permit No. 119057 Date 7-18-85

12. Water from Sand Gravel 13. County Winnebago

at depth 40 to 66 ft. Sec. 29.8g

14. Screen: Diam. 4 in. Twp. 46N

Length: 3 ft. Slot 0.15 Rge. 2E

Elev.  

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
<u>5</u>	<u>1253 Black</u>	<u>0</u>	<u>63</u>

SHOW  
LOCATION IN  
SECTION PLAT  
Twp. #114  
base map subd.  
SW NW NW

16. Size Hole below casing:   in.

17. Static level 40 ft. below casing top which is 10 in. NO  
above ground level. Pumping level 45 ft. when pumping at 12  
gpm for 6 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
<u>Top Soil</u>	<u>0</u>	<u>7</u>
<u>Sand, Gravel</u>	<u>7</u>	<u>66</u>

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Jack Bull DATE 7-4-85

White Copy -  
Ill. Dep. of Public Health  
Yellow Copy - Well Contractor  
Blue Copy - Well Owner

# INSTRUCTIONS TO DRILLERS.

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

## ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

### 1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam.  in. Depth  ft.  
Curb material  Buried Slab: Yes ☐ No ☐
- b. Driven ☐ Drive Pipe Diam.  in. Depth  ft.
- c. Drilled ☒ Finished in Drift ☒ In Rock ☐  
Tubular ☐ Gravel Packed ☐
- d. Grout:

(KIND)	FROM (FT.)	TO (FT.)
cutting	0	63

### 2. Distance to Nearest:

Building 10 Ft. Seepage Tile Field 100  
Cess Pool 0 Sewer (non Cast iron) 0  
Privy ☒ Sewer (Cast iron) 75  
Septic Tank 50 Barnyard ☒  
Leaching Pit ☒ Manure Pile ☒

3. Well furnishes water for human consumption? Yes ☒ No ☐

4. Date well completed 12/22/76

5. Permanent Pump Installed? Yes ☒ Date 12/24/76 No ☐

Manufacturer Red Jkt. Type S10 Location in well

Capacity 2 gpm. Depth of Setting 63 Ft.

6. Well Top Sealed? Yes ☒ No ☐ Type cap

7. Pitless Adapter Installed? Yes ☒ No ☐

Manufacturer Martinson Model Number BP-10

How attached to casing? compression

8. Well Disinfected? Yes ☒ No ☐

9. Pump and Equipment Disinfected? Yes ☒ No ☐

10. Pressure Tank Size 202 gal. Type Valental

Location in basement

11. Water Sample Submitted? Yes ☐ No ☒

### REMARKS:

Pump installed by Al Olson Pumps 102-195

## GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Art Thompson Well No. 634-7681

Address lot #87 Tresener Sub.

Driller Olson Well Co. License No. 102-95

11. Permit No. 52669 Date 9/24/76

12. Water from gravel 13. County Minn.

at depth 57 to 63 ft. Sec. 23

14. Screen: Diam. 5 in. Twp. 45

Length: 2 ft. Slot 15 Rge. 22

Elev.

### 15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
<u>5</u>	<u>15 steel</u>	<u>0</u>	<u>63</u>

SHOW LOCATION IN SECTION PLAT  
S10 S20 S30 S40  
S50 S60 S70 S80  
S90 NW NE

16. Size Hole below casing: 5 in.

17. Static level 33 ft. below casing top which is 1 ft. above ground level. Pumping level 38 ft. when pumping at 15 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
<u>topsoil</u>	<u>2</u>	<u>2</u>
<u>sand &amp; gravel</u>	<u>55</u>	<u>57</u>
<u>gravel</u>	<u>6</u>	<u>63</u>

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Robert Olson DATE 1/14/76

# ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

## GEOLOGICAL AND WATER SURVEYS WELL RECORD

### 1. Type of Well

- a. Dug ☐. Bored ☐. Hole Diam.  in. Depth  ft.  
Curb material . Buried Slab: Yes ☐ No ☐  
b. Driven ☐. Drive Pipe Diam.  in. Depth  ft.  
c. Drilled ☒. Finished in Drift ☒. In Rock ☐.  
Tubular ☐. Gravel Packed ☐.  
d. Grout:

(KIND)	FROM (FT.)	TO (FT.)
none		

### 2. Distance to Nearest:

Building 25 Ft. Seepage Tile Field 100  
Cess Pool  Sewer (non Cast iron)   
Privy  Sewer (Cast iron)   
Septic Tank 50 Barnyard   
Leaching Pit  Manure Pile

3. Well furnishes water for human consumption? Yes ☒ No ☐

4. Date well completed Oct. 1

5. Permanent Pump Installed? Yes ☒ Date Oct. 1 No ☐

Manufacturer Sta-Rite Type sub Location well  
Capacity 10 gpm. Depth of Setting 60 Ft.

6. Well Top Sealed? Yes ☒ No ☐ Type cap

7. Pitless Adapter Installed? Yes ☒ No ☐

Manufacturer Wells Model Number PWC 4-1  
How attached to casing? bolt-on

8. Well Disinfected? Yes ☒ No ☐

9. Pump and Equipment Disinfected? Yes ☒ No ☐

10. Pressure Tank Size 42 gal. Type ☒ Tru

Location basement

11. Water Sample Submitted? Yes ☒ No ☐

REMARKS: Water tested by  
Winn. Co. Health Dept.

10. Property owner John Owen Well No.

Address Valley Forge Trail Rockton

Driller Ed Greenfield License No. 92582

11. Permit No. 66772 Date Sept. 14

12. Water from sand 13. County Winn.

at depth 63 to 65 ft.

14. Screen: Diam. 4 in. Sec. 29

Length: 2 ft. Slot 20 Twp. 46N

Elev. 25

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	Blk. PE. 10.75	0	63
4	Johnson SF. screen	63	65

SHOW  
LOCATION IN  
SECTION PLAT  
Tot 46, Valine Rd,  
100W, 100W, SE 1/4,  
Sho in 1/4

16. Size Hole below casing:  in.

17. Static level 50 ft. below casing top which is 1 ft.  
above ground level. Pumping level 52 ft. when pumping at 10  
gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
<u>sand &amp; gravel</u>	<u>30</u>	<u>30</u>
<u>sand</u>	<u>35</u>	<u>65</u>

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Ed Greenfield DATE May 1-78



## INSTRUCTIONS TO DRILLERS

File Copy -  
Ill. Dupl. of Pu Health  
Allow Copy - Well Contractor  
Use Copy - Well Owner

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE  
DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST  
JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER  
SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

# ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

## 1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam.  in. Depth  ft.  
Curb material  Buried Slab: Yes ☐ No ☐
- b. Driven ☐ Drive Pipe Diam.  in. Depth  ft.
- c. Drilled ☒ Finished in Drift ☒ In Rock ☐  
Tubular ☐ Gravel Packed ☐
- d. Grout: ☐

(KIND)	FROM (Ft.)	TO (Ft.)
cutting	0	63

## 2. Distance to Nearest:

Building 70 Ft. Seepage Tile Field ☐  
Cess Pool ☐ Sewer (non Cast iron) ☐  
Privy ☐ Sewer (Cast iron) ☐  
Septic Tank not in yet Barnyard ☐  
Leaching Pit ☐ Manure Pile ☐

3. Well furnishes water for human consumption? Yes ☒ No ☐

4. Date well completed 5/24/78

5. Permanent Pump Installed? Yes ☒ Date 6/6/78 No ☐

Manufacturer red jkt Type sub Location in well

Capacity 3 gpm. Depth of Setting 45 Ft.

6. Well Top Sealed? Yes ☒ No ☐ Type cap

7. Pitless Adapter Installed? Yes ☒ No ☐

Manufacturer Baker Model Number 5"

How attached to casing? compression

8. Well Disinfected? Yes ☒ No ☐

9. Pump and Equipment Disinfected? Yes ☒ No ☐

10. Pressure Tank Size 4202 gal. Type Wixtrol

Location in basement

11. Water Sample Submitted? Yes ☐ No ☒

## REMARKS:

Pump installed by Al Olson Pumps 102-1963

## GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Dave Tresemer Well No. 841-77172

Address Lot #109 Tres. Sub.

Driller Olson Well Co. License No. 102-932

11. Permit No. 70336 Date 12/22/77

12. Water from gravel 13. County Winn.

at depth 53 to 63 ft. Sec. 29

14. Screen: Diam. 5 in. Twp. 40N

Length: 2 ft. Slot 15 Rge. 2E

Elev.

## 15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	15 steel	0	63

SHOW  
LOCATION IN  
SECTION PLAT

Lot 109, Tresemer  
Subd. 900's,  
280'E, 110'C

16. Size Hole below casing: 5 in.

17. Static level 35 ft. below casing top, which is 1

above ground level. Pumping level 5 ft. when pumping at 15

gpm for      hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
topsoil	3	3
sand & gravel	50	53
gravel	10	63

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Robert A. Olson DATE 6/23/78

FILL IN ALL PERTINENT INFORMATION REQUESTED. MAIL ORIGINAL TO STATE  
DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST  
JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER  
SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

# ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

## 1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam. 5 in. Depth 66 ft.  
Curb material ☐ Buried Slab: Yes ☐ No ☐
- b. Driven ☐ Drive Pipe Diam. 5 in. Depth 66 ft.
- c. Drilled ☒ Finished In Drift ☒ In Rock ☐  
Tubular ☐ Gravel Packed ☐
- d. Grout:

(KIND)	FROM (FT.)	TO (FT.)

## 2. Distance to Nearest:

Building 30 Ft. Seepage Tile Field 100'  
Cess Pool ☐ Sewer (non Cast Iron) ☐  
Privy ☐ Sewer (Cast Iron) ☐  
Septic Tank 25' Barnyard ☐  
Leaching Pit ☐ Manure Pile ☐

3. Well furnishes water for human consumption? Yes ☒ No ☐

4. Date well completed 10-18-79

5. Permanent Pump Installed? Yes ☒ Date 10-18-79 No ☐

Manufacturer Quintor Type Sub. Location Well  
Capacity 8 gpm. Depth of Setting 50 Ft.

6. Well Top Sealed? Yes ☒ No ☐ Type Cap

7. Pitless Adapter Installed? Yes ☒ No ☐

Manufacturer Williams Model Number Batted  
How attached to casing? Batted

8. Well Disinfected? Yes ☒ No ☐

9. Pump and Equipment Disinfected? Yes ☒ No ☐

10. Pressure Tank Size 42 gal. Type meadlist

Location In. Jernent

11. Water Sample Submitted? Yes ☐ No ☒

REMARKS:

# GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Bill Thurmond Well No.           

Address Lot 42 Tremmer Sub.

Driller Shurman Rany License No. 103-197

11. Permit No. 90665 Date Oct 18-79

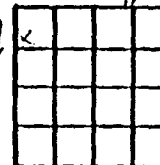
12. Water from sand + gravel 13. County Winnebago

at depth 40 to 66 ft. Sec. 29.8

14. Screen: Diam. 4 in. Twp. 46.5

Length: 5 ft. Slot 0.20 Rge. 2E

Elev.           



## 15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
<u>5</u>	<u>Steel</u>	<u>0'</u>	<u>66'</u>

SHOW  
LOCATION IN  
SECTION PLAT  
Lot 42, Tremmer Sub. Winnebago

16. Size Hole below casing: 5 in.

17. Static level 46 ft. below casing top which is 1 ft.  
above ground level. Pumping level 50 ft. when pumping at 30  
gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
<u>Top Soil</u>	<u>3'</u>	<u>3'</u>
<u>Sand</u>	<u>50'</u>	<u>53'</u>
<u>Sand + gravel</u>	<u>13'</u>	<u>66'</u>

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Shurman Rany DATE Oct. 30. 1979

White Copy -  
Ill. Dep. of Public Health  
Yellow Copy - Well Contractor  
Blue Copy - Well Owner

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE  
DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST  
JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER  
SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

## ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

### 1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam.  in. Depth  ft.  
Curb material  Buried Slab: Yes ☐ No ☐  
b. Driven ☐ Drive Pipe Diam.  in. Depth  ft.  
c. Drilled ☒ Finished in Drift ☒ In Rock ☐  
Tubular ☐ Gravel Packed ☐  
d. Grout: ☐

(KIND)	FROM (FT.)	TO (FT.)
none		

### 2. Distance to Nearest:

Building 20 Ft. Seepage Tile Field 100  
Cess Pool  Sewer (non Cast iron)   
Privy  Sewer (Cast iron)   
Septic Tank 50 Barnyard   
Leaching Pit  Manure Pile

3. Well furnishes water for human consumption? Yes ☒ No ☐  
4. Date well completed Sept. 9  
5. Permanent Pump Installed? Yes ☒ Date Sept. 9 No ☐  
Manufacturer Red Jacket Type 5-6 Location well  
Capacity 10 gpm. Depth of Setting 60 Ft.  
6. Well Top Sealed? Yes ☒ No ☐ Type cap  
7. Pitless Adapter Installed? Yes ☒ No ☐  
Manufacturer Wells Model Number AWC 4-1  
How attached to casing? bolt on  
8. Well Disinfected? Yes ☒ No ☐  
9. Pump and Equipment Disinfected? Yes ☒ No ☐  
10. Pressure Tank Size 42 gal. Type WX 302 X-Trol  
Location basement  
11. Water Sample Submitted? Yes ☒ No ☐

### REMARKS:

Water sample reported  
safe by Winnebago Co  
Health Dept.

## GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner John Owen Well No.   
Address 9163 Valrie Roscoe  
Driller Ed Trzcinski License No. 92-582  
11. Permit No. 50622 Date Aug. 5  
12. Water from sand 13. County Winnebago  
Formation  
at depth 63 to 65 ft. Sec. 29E  
14. Screen: Diam. 4 in. Twp. 46N  
Length: 2 ft. Slot 20 Rge. 2E  
Elev.


### 15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	Blk. PE. 11#	0	63
4	Johnson SS screen	63	65

SHOW  
LOCATION IN  
SECTION PLAT  
106°N 100°W  
NW NW NW

16. Size Hole below casing:  in.  
17. Static level 48 ft. below casing top which is 1 ft.  
above ground level. Pumping level 49 ft. when pumping at 10  
gpm for 3 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
sand & gravel	30	30
sand	35	65

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Ed Trzcinski DATE Oct 6 76

FILL IN ALL PERTINENT INFORMATION. TESTED AND MAIL ORIGINAL TO STATE  
DEPARTMENT OF PUBLIC HEALTH, CONSUMERS HEALTH PROTECTION, 535 WEST  
JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER  
SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

# ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

## 1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam.  in. Depth  ft.  
Curb material  Buried Slab: Yes ☐ No ☐
- b. Driven ☐ Drive Pipe Diam.  in. Depth  ft.
- c. Drilled ☒ Finished in Drift ☒ In Rock ☐  
Tubular ☐ Gravel Packed ☐
- d. Grout:

(KIND)	FROM (FT.)	TO (FT.)

## 2. Distance to Nearest:

Building 30 Ft. Seepage Tile Field 75  
Cess Pool  Sewer (non Cast iron)   
Privy  Sewer (Cast iron)   
Septic Tank 100 Barnyard   
Leaching Pit  Manure Pile

3. Well furnishes water for human consumption? Yes ☒ No ☐

4. Date well completed 8/13/77

5. Permanent Pump Installed? Yes ☒ Date 8/19/78

Manufacturer Red Jacket Type sub Location Well  
Capacity 25 gpm. Depth of Setting 65 Ft.

6. Well Top Sealed? Yes ☒ No ☐ Type TP-5

7. Pitless Adapter Installed? Yes ☒ No ☐

Manufacturer Martinez Model Number EP-10  
How attached to casing? screw on

8. Well Disinfected? Yes ☒ No ☐

9. Pump and Equipment Disinfected? Yes ☒ No ☐

10. Pressure Tank Size  gal. Type Well-V-Tank 202

Location Basement

11. Water Sample Submitted? Yes ☐ No ☒

REMARKS:

Lot # 94 Tresemer Estates

# GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Dutch Courtwright Well No.

Address 414 Pennsylvania Ave. Lower Park

Driller Winifred McKinney License No. 102-221

11. Permit No. 65802 Date 8/24/77

12. Water from Sand & gravel 13. County Winnebago

Formation   at depth  to  ft. Sec. 2018

14. Screen: Diam. 5 in. Twp. 46-N

Length: 3 ft. Slot  Rge. 2-1

Elev.

## 15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5"	Steel 15 lb	0	68'

SHOW  
LOCATION IN  
SECTION PLAT  
for 94 Tresemer  
Est. Winnebago

16. Size Hole below casing: 4/7/8

17. Static level 43 ft. below casing top which is 1 ft.  
above ground level. Pumping level 52 ft. when pumping at 25  
gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top soil	2'	2'
Sand & gravel	67'	69'

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Winifred McKinney DATE 9-16-77

**TRANSMITTAL SLIP****Date**C. 2  
10/13/98

October 13, 1998

**TO:**

Mike Ribordy - US EPA Region V

**FROM:**

Robin Smith - IDOT District 2

**SUBJECT:**

ISGS Report #611 - South Beloit Bypass Project

**ACTION**

- |   |   |
|---|---|
| <input type="checkbox"/> NOTE AND FILE              | <input type="checkbox"/> PREPARE REPLY FOR MY SIGNATURE |
| <input type="checkbox"/> NOTE AND RETURN TO ME      |   |
| <input type="checkbox"/> RETURN WITH MORE DETAILS   | <input type="checkbox"/> TAKE APPROPRIATE ACTION        |
| <input type="checkbox"/> NOTE AND SEE ME ABOUT THIS | <input checked="" type="checkbox"/> PER YOUR REQUEST    |
| <input type="checkbox"/> PLEASE ANSWER              | <input type="checkbox"/> SIGNATURE                      |
| <input type="checkbox"/> FOR YOUR APPROVAL          | <input type="checkbox"/> FOR YOUR INFORMATION           |
| <input type="checkbox"/> PER OUR CONVERSATION       | <input type="checkbox"/> INVESTIGATE AND REPORT         |

**COMMENTS:**

Attached is a complete copy of our Preliminary Environmental Site Assessment for our South Beloit Bypass Project. I hope that you will find the information useful. If you have any questions please call me at (815)284-5953.

*John Matsko - 701A Coordinator  
819 East Ave  
Dixon IL 61001  
Thanks.  
Robin*

PBM-1326

**PRELIMINARY ENVIRONMENTAL SITE ASSESSMENT**

**FINAL REPORT**

**DATE:** December 23, 1996

**IDOT DESIGN DATE:** June 30, 1998

**DATE REQUEST RECEIVED:** February 16, 1994

**LOCATION:** South Beloit Bypass from Madison Road (Wisconsin Route 213), Beloit, Wisconsin, to Interstate 90 and Rockton Road, South Beloit, Illinois; Beloit, South Beloit, and Belvidere NW Quadrangles (USGS 7.5-minute topographic maps); T1N, R12E, Sections 21, 28, and 33; T46N, R1E, Sections 1, 2, 11, and 12; T46N, R2E, Sections 7, 8, 9, 15, 16, 17, 18, 20, 21, and 22.



**Table of Contents**

GLOSSARY OF ACRONYMS .....	3
PRELIMINARY ENVIRONMENTAL RISK ASSESSMENT .....	4
RPTA COMPLIANCE INFORMATION .....	5
RPTA COMPLIANCE KEY .....	6
BACKGROUND .....	7
Introduction .....	7
Geology .....	7
Hydrogeology .....	8
DISCUSSION .....	11
Man-Made Hazards .....	11
Natural Hazards .....	28
FINDINGS .....	29
ENDORSEMENTS .....	29
INFORMATION SOURCES .....	30
Bibliography .....	30
Government Lists .....	31
Maps .....	33
Photographs .....	34
Other .....	35
APPENDIX A .....	37
APPENDIX B .....	40
LIST OF ATTACHMENTS .....	42

## GLOSSARY OF ACRONYMS

ACM	-	Asbestos-Containing Materials	OSHA	-	Occupational Safety and Health Administration
AST	-	Aboveground Storage Tank	OVA	-	Organic Vapor Analyzer
ASTM	-	American Society for Testing and Materials	PAH/PNAs-		Polynuclear Aromatic Hydrocarbons
BTEX	-	Benzene, Toluene, Ethyl Benzene, and total Xylenes	PCBs	-	Polychlorinated Biphenyls
CL	-	Centerline	PESA	-	Preliminary Environmental Site Assessments
CERCLA-		Comprehensive Environmental Response, Compensation, and Liability Act	PGC	-	Photovac Gas Chromatograph
CERCLIS-		Comprehensive Environmental Response, Compensation, and Liability Information System	PID	-	Photoionization Detector
FEMA	-	Federal Emergency Management Agency	POTW	-	Publicly-Owned Treatment Works
FHBM	-	Flood Hazard Boundary Maps	ppb	-	parts per billion (equivalent to $\mu\text{g}/\text{kg}$ for solids, and $\mu\text{g}/\text{l}$ in liquids)
FID	-	Flame Ionization Detector	ppm	-	parts per million (equivalent to $\text{mg}/\text{kg}$ in solids, and $\text{mg}/\text{l}$ in liquids)
FIRM	-	Flood Insurance Rate Maps	PRP	-	Potentially Responsible Party
GC	-	Gas Chromatograph	RCRA	-	Resource Conservation and Recovery Act
HRS	-	Hazard Ranking System	RPTA	-	Responsible Property Transfer Act
ICC	-	Illinois Commerce Commission	ROW	-	Right-of-Way
IDOT	-	Illinois Department of Transportation	SDWA	-	Safe Drinking Water Act
IEMA	-	Illinois Emergency Management Agency	SIA	-	Surface Impoundment Assessment
IEPA	-	Illinois Environmental Protection Agency	SIC	-	Standard Industrial Classification
IMD	-	Illinois Manufacturers Directories	SVOC	-	Semi-volatile Organic Compound
ISD	-	Illinois Services Directories	TACO	-	Tiered Approach to Cleanup Objectives
ISGS	-	Illinois State Geological Survey	TCLP	-	Toxicity Characteristic Leaching Procedure
ISV	-	Initial Site Visit	TRI	-	Toxic Release Inventory
JULIE	-	Joint Utility Locating Information for Excavators	TSCA	-	Toxic Substances Control Act
LUST	-	Leaking Underground Storage Tank	TVOCs	-	Total Volatile Organic Compounds
$\mu\text{g}/\text{kg}$	-	micrograms per kilogram (ppb)	USDA	-	United States Department of Agriculture
$\mu\text{g}/\text{l}$	-	micrograms per liter (ppb)	USEPA-		United States Environmental Protection Agency
$\text{mg}/\text{kg}$	-	milligrams per kilogram (ppm)	USGS	-	United States Geological Survey
$\text{mg}/\text{l}$	-	milligrams per liter (ppm)	UST	-	Underground Storage Tank
M.P.	-	Milepost	VOC	-	Volatile Organic Compound
MSDS	-	Material Safety Data Sheet	WMRC	-	Waste Management and Research Center (formerly Hazardous Waste Research and Information Center)
NFR	-	No Further Remediation			
NFRAP-		No Further Remedial Action Planned			
NIPC	-	Northern Illinois Planning Commission			
NPL	-	National Priority Listing			
NRCS	-	Natural Resources Conservation Service (formerly Soil Conservation Service)			
OSFM	-	Office of the State Fire Marshal			



### **PRELIMINARY ENVIRONMENTAL RISK ASSESSMENT<sup>1</sup>**

Based upon the following and as of October 31, 1996, the date of the last physical examination of the project area, it is determined that this project has **MODERATE** (defined below) risk for the occurrence of regulated substances or natural hazards. A CERCLIS (NPL) site (Beloit Corporation, Site 611-3), a landfill (Beloit Municipal Landfill, Site 611-8), and two large industrial sites (Ecolab, Inc., Site 611-20, and Regal Beloit Corporation, Site 611-22) are located along the project area. No VOCs, other than one with a retention time similar to methane, were detected in soil gas or the headspace of soil samples from these or any of the other sites tested. No petroleum hydrocarbons were detected in soil samples from three sites tested. No PCBs were detected in soil samples from nine sites tested.

**MODERATE.** After a review of all available information, indications are found that identify a potential for soil or water contamination or other environmental hazard; however, the hazard was not verified by ISGS testing. The area could have a long history of industrial or commercial use, or a CERCLIS or LUST site may be present along the project ROW. This is the lowest possible rating if anticipated construction intersects an UST.

---

<sup>1</sup> Risk Assessment is the method used to assign a relative risk factor to the probability and likely consequence of encountering man-made and natural hazards. A hazard is the set of inherent properties known to be dangerous to the environment. This rating has an implication for the level of hazard which might be encountered. However, a MODERATE or HIGH risk site might also be easily mitigated by proper methods.

### **RPTA COMPLIANCE KEY**

The decision as to whether property is subject to RPTA compliance is based on several considerations. The following is a key to the reason why parcels identified in the report are subject to RPTA compliance.

1. This parcel contains a facility that is required to prepare or have available an MSDS for a hazardous chemical, as defined under the OSHA Hazard Communication Standard and falls under one of the following categories:
  - A. Hazardous chemicals on the parcel are present in amounts equal to or greater than 4,536 kg (10,000 lbs).
  - B. Extremely hazardous substances on the parcel are present in amounts greater than or equal to 227 kg (500 lbs) or their threshold planning quantity, whichever is less.
2. This parcel contains one or more registered USTs as reported to the OSFM.
3. This parcel contains one or more USTs that do not appear on the OSFM's UST list but that may be subject to RPTA.<sup>2</sup>

This parcel may be subject to RPTA compliance upon further investigation. Present information is inadequate, inconclusive, or suggests caution. See report for details.

---

USTs/facilities exempt from RPTA are:

- Farm or residential tank of 4,164 L (1,100 gal) or less capacity used for storing motor fuel for noncommercial purposes;
- Tank used for storing heating oil for consumptive use on the premises where stored;
- Septic tank;
- Pipeline facility (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968; the Hazardous Liquid Pipeline Safety Act of 1979; or which is an intrastate pipeline regulated under comparable state laws.
- Surface impoundment, pit, pond, or lagoon;
- Stormwater or wastewater collection system;
- Flow-through process tank;
- Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations;
- Storage tank situated in an underground area (such as a basement, cellar, mine working, drift, shaft, tunnel) if the storage tank is situated above or upon the surface of the floor.

**RPTA COMPLIANCE INFORMATION**

The following listed properties within or along the proposed project require RPTA compliance. The reason(s) for this action are noted and described in the RPTA Compliance Key on the page following.

<b><u>Parcel/Address</u></b>	<b><u>Reason</u></b>
Del Insko Stable, Inc. 2360 Fischer Road	4
Beloit Corporation 1165 Prairie Hill Road	1A
United Tool and Engineering Co. 4095 Prairie Hill Road	4
Cretex Pressure Pipe, Inc. 4416 Prairie Hill Road	2
Prairie Hill Auto (Brake Realty and Custom Builders) 4513 Prairie Hill Road	4
Material Service Corporation 4633 Prairie Hill Road	2
Ruan Leasing Co. 13850 South Dearborn Avenue	2
Lehigh Portland Cement Co. 13700 South Dearborn Avenue	4
R.B.R. Trucking, Inc. 4950 Rockton Road	4
Waste Management of Wisconsin, Inc. 13125 North 2nd Street	2
Makerite Manufacturing Co. 13571 Metric Drive	4
Ecolab, Inc. 5151 Rockton Road	4
Regal-Beloit Corporation 5404 Rockton Road	4
Coltec Industries 6402 Rockton Road	2

## **BACKGROUND**

### **Introduction**

This is the Final Report of a preliminary environmental assessment by the ISGS of natural and man-made hazards that may be encountered on or along the ROW of this project in Winnebago County (Illinois) and Rock County (Wisconsin). The project involves the proposed Beloit Bypass, a new route to be built from 0.8 km (0.5 mi) west of Beloit, WI, around the southwest side of South Beloit, IL, to the interchange with Interstate 90 (I-90) at Rockton Road (see Attachment 1). Originally submitted as a request for clearance of a corridor approximately 2 km (1.25 mi) in width, the project extent was changed by submittal of more detailed project plans by Mr. William D. Ost, District Engineer, on October 20, 1995. From Madison Road (Wisconsin Route 213) west of Beloit to the Rock River on the southwest side of South Beloit, the project involves a corridor 800 m (2625 ft) wide. Beginning at the Rock River, the project is restricted to Prairie Hill Road east to Illinois Route 251 (IL 251), thence south along IL 251 to Rockton Road, and east along Rockton Road to I-90. The total length of the project is approximately 13.7 km (8.5 mi).

The project consists of entirely new construction from Madison Road in Wisconsin to the Rock River in Illinois. From the Rock River to I-90, construction varies from converting an existing two-lane road to a four-lane highway to widening and ramp addition or other modification of existing four-lane highway. Project features include new ROW and easements, railroad ROW, building demolition and modification, excavation, and subsurface utility relocation. This report identifies and evaluates known or potential hazardous material problems and natural hazards.

An assessment has been prepared using historical and geological information including aerial photographs, U.S. Geological Survey topographic maps, plat maps, file information of the ISGS and state agencies, and various other sources of information. An on-site investigation has been completed. The specific methods used to conduct the assessment are contained in "A Manual for Conducting Preliminary Environmental Site Assessments for Illinois Department of Transportation Highway Projects" (Erdmann et al., 1996). Natural and man-made hazards have been identified and potential detriments or considerations have been listed as are suitable within the scope of this preliminary survey. If new environmental information is received concerning this site, this report will be updated accordingly and the information made part of the permanent file. If such information is determined to have a significant impact on the findings of this report, the report will be corrected by addendum and resubmitted to IDOT Bureau of Design and Environment.

### **Geology**

**Soils.** Along the project ROW, the NRCS has classified the Kane loam, Comfrey loam, and Selma loam soils as hydric. Non-prime farmland soils along the ROW in Wisconsin are the Griswold loam (6-12% slopes, eroded), Winnebago silt loam (2-6% slopes, eroded), Edmund loam (2-6 and 6-12% slopes, eroded), Oshtemo sandy loam (dark variety, 6-12% slopes, eroded), Rockton loam (6-12% slopes, eroded), and Dickman sandy loam (0-2% slopes); in Illinois non-prime farmland soils comprise the Griswold sandy loam (5-9% slopes, eroded), Hononegah loamy coarse sand (0-3 and 3-7% slopes), Chelsea loamy fine sand (7-12% slopes), Rodman-Warsaw complex (4-7 and 7-12% slopes, eroded), and Urban land-Wea complex (0-3% slopes), as well as loamy Orthents and gravel pits.

**Surficial geology.** Drift thickness in the project area is highly variable, depending on the location of underlying bedrock paleovalleys. In those sections of the project area in T46N, R2E, in Illinois, drift thickness ranges from less than 30 m (100 ft) to more than 91 m (300 ft), while to the west in the northeast part of T46N, R1E, the drift thins to as little as 6 m (20 ft) or less. To the north in T1N, R12E, in Wisconsin, drift thickness ranges from 30 to 61 m (100 to 200 ft).

Published reports indicate that, in paleo-upland areas, surficial deposits consist of the Winnebago Formation, which sits on bedrock. This formation is composed dominantly of till with intercalated silt, gravel, and sand. In lowland and adjacent areas, surficial deposits are composed of sand and gravels deposited by the ancestral Rock River and its tributaries; these deposits commonly sit directly on bedrock at depths of 30 m (100 ft) or more, though they may interfinger with glacial tills adjacent to uplands. However, during field testing for this project, sand and gravel was encountered in all test holes at depths of 0.9-1.5 m (3-5 ft). Silt, sand, and gravel deposited by the modern Rock River can be found in floodplains along the river.

**Bedrock geology.** The uppermost bedrock unit in the project area consists of Ordovician-age dolomite of the combined Galena-Platteville Group in paleo-upland areas. In areas underlain by paleovalleys of the ancestral Rock River, the uppermost bedrock unit comprises lowermost Galena-Platteville dolomite, sandstone of the Glenwood and St. Peter Formations, and sandstone, argillaceous and sandy limestone, and dolomite of the Ancell Group.

### Hydrogeology

**Drainage direction.** The project area lies in both upland areas in Wisconsin and the central part of the Illinois section to lowland areas along the Rock River and its tributaries. Flow of surface water will most likely be to the west and southwest in Wisconsin to the East Fork of Racoon Creek and its tributaries; this drainage flows into the Pecatonica River, which is tributary to the Rock River near Rockton, IL. In Illinois, surficial water will most likely flow directly to the Rock River or to Dry Creek, which is tributary to the Rock River downstream from Rockton. However, in urbanized parts of the project area, most surficial runoff will be controlled by the storm sewer system; such systems typically are designed to follow natural drainage patterns.

Neither the near-surface nor the shallow unconfined groundwater flow direction was specifically determined for this project, but they generally mimic local topography.

**Depth to water in project boreholes.** Water was encountered in two boreholes completed for this project in October 1996. Depth to water in these boreholes was 2.7 m (9 ft). These holes were located near the northern end of the project area in Wisconsin and just east of the Rock River along Prairie Hill Road in Illinois. No water was encountered in any other holes, all drilled to a depth of 2.7 m (9.0 ft).

**Surficial public water supplies.** The proposed project is not likely to impact surficial sources for public water supplies.

**Groundwater recharge.** In Illinois, the project area is located in Zone 1 for groundwater recharge potential, where Zone 1 indicates the highest potential for groundwater recharge and Zone 7 indicates the lowest potential as mapped by Keefer and Berg (1990). Similar information is not available for Wisconsin. This information concerning groundwater recharge potential is provided for

a general regional perspective only, as this map was prepared at a scale of 1:1,000,000 and is not applicable on a site-specific basis.

According to Rick Cobb, manager of the IEPA Groundwater Section, as of August 1996 there were no sole-source aquifers in Illinois as defined by Section 1424(E) of the Safe Drinking Water Act, and so the proposed project will not affect any such aquifers in Illinois. Mr. Bill Ryan, U.S. Environmental Protection Agency, Region 5, stated on September 23, 1996, that there are no sole-source aquifers in Wisconsin either.

**Groundwater protection areas.** There are no known municipal water wells within 305 meters (1000 feet) of the project ROW, and no IDOT facility work is planned for the proposed project; so there should be no impact on any setback zones as determined by the IEPA Division of Public Water Supplies or the Wisconsin Bureau of Public Water Supply.

**Potential for contamination of shallow aquifers.** The project area in Illinois is located in Zones A2 and AX, according to the map "Potential for contamination of shallow aquifers from land burial of municipal wastes" (Berg et al., 1984). Zones on this map range from A (highest potential for contamination) to G (lowest potential for contamination). Most of the area is located in zone A2, which is described as having thick, permeable sand and gravel within 6 m (20 ft) of the land surface. The areas along the Rock River and Dry Creek are located in zone AX, which is described as alluvium (a mixture of gravel, sand, silt, and clay along streams) that is variable in composition and thickness. Similar information is not available for Wisconsin. This information is provided for a general regional perspective only, as the map was prepared at a scale of 1:500,000 and is not applicable on a site-specific basis. No borings were made to a depth of 15.2 meters (50 feet) to verify the geology of this site.

**Well log information.** ISGS well records indicate that water in the Illinois portions of the project area is obtained from two horizons. Water comes primarily from sand and gravel deposits in the glacial drift. Depths to drift aquifers range from 15 to 44 m (50 to 145 ft) along Dry Creek and the Rock River, while in the sand-and-gravel mining areas along Prairie Hill and Rockton Roads, depths range from 0 to 27 m (0 to 90 ft). Water is obtained locally from bedrock aquifers at depths ranging from 12 to 73 m (40 to 240 ft) below the surface. Wells are located throughout the project area, with heaviest concentrations in the residential areas along Prairie Hill Road and Blackhawk Boulevard in Sections 7 and 17, T46N, R2E. Table 1 lists the location of known wells that are within 61 m (200 ft) of the ROW or study limits in Illinois. Other wells not in the ISGS database may be present near the project area.

Mr. Robert M. Krill, Director of the Wisconsin Bureau of Public Water Supply, stated in a letter dated May 5, 1995, that there are an estimated 50-150 private wells serving individual residences located in the study area in Wisconsin. No information was available concerning the actual locations of such wells.

Table 1. Location of wells, source of water, and depth of producing zone for water wells within 61 m (200 ft) of the project ROW in Illinois.

Owner Listed on Drill Record	Location	Water Obtained From	
		Material	Depth
Griessman, Rolf	SW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 15, T46N, R2E	limestone	43-49 m (140-160 ft)
Amwood Homes	NE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 7, T46N, R2E	rock	20-38 m (67-125 ft)
Dalton, Richard	SE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 12, T46N, R1E	sand	30-37 m (100-120 ft)
Alms, Dennis Moore, Karen	NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 12, T46N, R1E	sand	37-39 m (120-128 ft)
Mallicote, Earl	Section 12, T46N, R1E	— <sup>3</sup>	—
Moffitt, Robert	NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 12, T46N, R1E	—	—
Smith, Kenneth	NW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 12, T46N, R1E	sand	20-21 m (66-68 ft)
Skirver, Jim	SW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 1, T46N, R1E	—	—
Walreth, Mark	SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 1, T46N, R1E	sand & gravel	11-18 m (35-60 ft)
Seynoar, Doyle	SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 16, T46N, R2E	sand & gravel	—
Wilson Truck Ter.	SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 16, T46N, R2E	—	—
Ellenburger, Fred	SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 16, T46N, R2E	sand & gravel	18-25 m (58-83 ft)
Makerite Mfg. Co.	200' SL, 100' WL, SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 16, T46N, R2E	sand	21-21 m (68-70 ft)
Kutzke, Bud	SW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 16, T46N, R2E	sand	15-16 m (49-51 ft)
Witte, Dean	200' NL, 100' WL, Section 17, T46N, R2E	sand	21-21 m (68-70 ft)

<sup>3</sup>— unknown

Table 1. Location of wells, source of water, and depth of producing zone for water wells within 61 m (200 ft) of the project ROW in Illinois.			
Owner Listed on Drill Record	Location	Water Obtained From	
		Material	Depth
Clankie, Lawrence	100' NL, 100' WL, N $\frac{1}{4}$ ENE $\frac{1}{4}$ of Section 17, T46N, R2E	sand	21-22 m (69-71 ft)
Erickson, Eldon	100' NL, 100' EL, NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 17, T46N, R2E	--	--
Meyers, Emery	NW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 2, T46N, R1E	--	--
Benedetti, Ken	100' SL, 100' EL, SW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 2, T46N, R1E	sand	43-44 m (142-145 ft)
Barrett, Vern	100' NL, 200' EL, NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 2, T46N, R1E	--	--
Tresemmer, Dave	2200' SL, 1800' EL, SE $\frac{1}{4}$ of Section 2, T46N, R1E	--	--

## DISCUSSION

### Man-Made Hazards

The project area in Wisconsin is mainly residential and agricultural. Though some farms have ASTs, no USTs were found during a inspection of each farm or through examination of the Wisconsin UST list. Residential and agricultural USTs are contained on that list in areas outside of the corridor.

In South Beloit and the nearby communities of Roscoe and Rockton, the project area is mixed industrial, commercial, residential, and agricultural. A total of 55 commercial, industrial, and spill sites were identified along the project ROW as being of potential concern; 22 of these sites were tested. The remaining sites were either determined to be too far from the project to be of concern or involved a non-VOC or SVOC compound with limited retention time. Sites are discussed in a counterclockwise direction, beginning in Wisconsin and extending south to the Rock River and east to I-90. The locations of tested sites are shown on Attachment 1. Attachment 2 contains maps and photographs showing the locations of test holes and surface samples. The results of testing for VOCs are contained in Attachment 3. At the request of Ms. Robin Smith of IDOT District 2, all testing was restricted to existing ROW.

### *Wisconsin*

**Site 611-1. Former commercial site:** Former junkyard, northwest quadrant of West Road and St. Lawrence Avenue (2639 West St. Lawrence Avenue). Aerial photographs show this parcel to be residential and agricultural from at least 1970 to present. However, there was a junkyard here from at least 1951 through 1964 or later. The junkyard was probably not started much earlier than



the date of that photograph, because there were just a few cars in the 1951 photographs. The junkyard extended from St. Lawrence Avenue north approximately 335 m (1,100 ft); see Attachment 1A for location. The area was agricultural when the 1939 photographs were taken. Two test holes were bored in existing ROW along the north side of St. Lawrence Avenue (see Attachment 1A for location of test holes); no testing was performed in the former junkyard itself, which is located on private property. Both holes were bored to a total depth of 2.7 m (9 ft) and were tested at 0.9, 1.8, and 2.7 m (3, 6, and 9 ft). No VOCs significantly above background levels were detected in soil gas taken from either hole.

A soil sample taken from a depth of 0.6 m (2 ft) in test hole 1a was analyzed for PCBs. Results of this testing indicate that PCBs were not detected in the soil sample at concentrations greater than 1 ppm, the lower test detection limit.

### *Illinois*

**Commercial site: Kearns Service, NE¼ of Section 2, T46N, R1E (2371 Fischer Road).** According to Mr. Kearns, this business was built in the 1960s, servicing farm implements both in the field and in the shop. Waste oil is placed in an AST on the concrete slab inside the building and burned in a waste-oil burner for heat. The current building is shown on aerial photographs from 1979 to present; it is not contained on 1970 photographs, though other buildings were present at that time. The parcel was agricultural from 1939 through 1964. Based on discussion with Larry Hill of District 2, this site was not tested because it is west of the probable alignment of the project.

**Commercial Site: Del Insko Stable, Inc., SE¼ of Section 2, T46N, R1E (2360 Fischer Road).** This riding stable is listed on the October 31, 1996, UST list as having two USTs in an active status. Discussion with personnel in the office at the stable revealed that the USTs were removed in about 1985; they were located near the garage south of the office and residence, about 47 m (154 ft) south of Fischer Road. The facility is shown on aerial photographs from 1958 to present. The parcel was agricultural from at least 1939 through 1951. It is in the 800-m corridor, but not near any of the potential routes indicated on IDOT plans. Based on discussion with Larry Hill of District 2, this site was not tested because it is west of the probable alignment of the project.

**Site 611-2. Commercial site: Sand Prairie Auto Parts and Car Sales, Inc., SW¼ of Section 1, T46N, R1E (1760 Fischer Road).** This junkyard is located partially within the project corridor along the eastern boundary (see Attachments 1B and 2A). According to the owner, it was built in an area that was formerly agricultural. It is currently surrounded by agricultural and residential parcels. The facility is shown on aerial photographs from 1958 to present; the parcel was agricultural on photographs from 1939 through 1951. Information received from IEPA's Office of Chemical Safety on December 6, 1995, indicates that a fire occurred in a junkyard at the corner of Witmer and Fischer Roads on April 30, 1980 (IEMA Incident No. 800219). This was probably the junkyard, as it is located just east of Witmer Road. The IEPA was to investigate due to possible "harmful emissions." No further information was available from IEPA files.

Two test holes were bored in existing ROW along the north side of the facility; holes were located along the south side of Fischer Road east of the project corridor (see Attachment 2A). Both holes were carried to a total depth of 2.7 m (9 ft) and were tested at 0.9, 1.8, and 2.7 m (3, 6, and 9 ft). No VOCs significantly above background levels were detected in soil gas taken from either hole.

A soil sample taken from a depth of 0.8 m (2.5 ft) in test hole 2b was analyzed for PCBs. Results of this testing indicate that PCBs were not detected in the soil sample at concentrations greater than 1 ppm, the lower test detection limit.

**Site 611-3. CERCLIS/NPL/spill site: Beloit Corporation, southwest of Prairie Hill Road between Blackhawk Boulevard (Illinois Route 2) and the Rock River (1165 Prairie Hill Road).** This large parcel is bounded by Prairie Hill Road on the northeast, the Rock River on the west and northwest, Blackhawk Boulevard on the east, and an access road on the south (see Attachment 2B). It is shown on aerial photographs from 1964 to present; the parcel was vacant in 1958 and agricultural from at least 1939 through 1951. It has been owned by Beloit Corporation since 1957, prior to which it remained farmland. The business manufactures machines that produce layered paper products from paper pulp. According to Beloit Corp.'s Hazardous Waste Contingency Plan, waste streams from the manufacturing process include corrosive metal-bearing waste from electropolishing operations; solid and liquid waste from printing operations; used paint cans, rags, and brushes; and spent liquid solvents from parts washing. It is a CERCLIS site.

According to information in IEPA files, reviewed on January 2 and December 12, 1996, VOCs were first discovered in on-site monitoring wells and in nearby residential water wells. An investigation by the IEPA Division of Land Pollution Control in 1988 found that drinking water was contaminated in 17 private water wells. Contaminants above drinking-water standards were tetrachloroethylene (500 ppb maximum), trans-1,2-dichloroethylene (11 ppb maximum), 1,1,1-trichloroethane (212 ppb maximum), 1,1-dichloroethylene (17 ppb maximum), and trichloroethylene (11 ppb maximum). The site was officially entered on the Superfund NPL on August 30, 1990. Further investigation by Warzyn Inc., consultant to the company, detected the following chemicals in various media at the site:

#### Volatile organic compounds

Chlorinated alkanes: 1,1,1-trichloroethane, 1,1-dichloroethane, 1,2-dichloroethane, and chloromethane.

Chlorinated alkenes: tetrachloroethene, trichloroethene, 1,1-dichloroethene, and 1,2-dichloroethene.

Aromatics: benzene, ethyl benzene, xylene, toluene, chlorobenzene, and 1,2-dichlorobenzene.

Ketones: acetone, 2-butanone (methyl ethyl ketone), 4-methyl-2-pentanone (methyl isobutyl ketone), and 2-hexanone.

#### Semivolatile organic compounds

Phenols: phenol, 2-methylphenol (o-cresol), 4-methylphenol (p-cresol), 2,4-dimethylphenol, and 4-nitrophenol.

PAHs: naphthalene, 2-methylnaphthalene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(k)fluoranthene, benzo(a, h)anthracene, and benzo(g,h,i)perylene.

Phthalates: diethylphthalate, di-n-butylphthalate, butylbenzylphthalate, bis(2-ethylhexyl)phthalate, and di-n-octylphthalate.

PCBs: aroclors 1248, 1254, and 1260.

Metals: arsenic, barium, cadmium, copper, iron, magnesium, manganese, nickel, and silver.

Further work by Montgomery Watson Americas Inc. (formerly Warzyn Inc.) in 1995 determined that the overall groundwater flow was to the south-southwest toward the Rock River. However, their map shows the potential for flow north along Innovation Drive (the access road to the plant) from the Research Center and the area immediately to the south to Prairie Hill Road west of the railroad tracks (see Attachment 2B). Such northward flow is consistent with earlier groundwater potentiometric investigations performed in 1986. The 1995 report recommended extraction of the groundwater, treatment with air stripping, and discharge to the Rock River, which flows south along the west side of the parcel. Treatment started in the spring of 1996. Extraction wells were installed in the area south of the manufacturing plant. No further information was available from IEPA files.

Beloit Corp. is also listed in the IEPA Incident Database (IEMA No. 93260S) with a spill of ethylene glycol in September 1993. Information received from the IEPA, Office of Chemical Safety, on December 6, 1995, and December 17, 1996, indicated that about 11 L (3 gal) of ethylene glycol was discharged from a refrigeration unit due to equipment failure. The material flowed into a storm sewer and discharged to the Rock River. No additional information was available from IEPA.

The chemicals involved at this CERCLIS site include VOCs, which can be detected by ISGS test equipment. Also, the contamination is believed by the IEPA and the consultants to the company to be mainly near the plant at the southern portion of the parcel, south of a groundwater divide located between the main manufacturing plant and the research and development laboratory (see Attachment 2B). Therefore, two test holes were bored along Prairie Hill Road. Test hole 611-3a was bored to a total depth of 2.7 m (9 ft) west of Innovation Drive. At a depth of 0.9 m (3 ft), 60 ppm of total VOCs were detected in soil gas using the OVA in survey mode; this was determined to have a retention time similar to methane using the OVA in gas-chromatograph mode. No VOCs significantly above background levels were detected in soil gas from 1.8 m (6 ft) or 2.7 m (9 ft).

Test hole 611-3b was bored between Innovation Drive and the railroad tracks. No VOCs significantly above background levels were detected in soil gas taken from depths of 0.9 m (3 ft) or 1.8 m (6 ft). However, in soil gas taken from 2.7 m (9 ft), 10 ppm of total VOCs were detected; this was demonstrated to have a retention time similar to methane using the OVA in gas-chromatograph mode.

Soil samples taken from a depth of 2.7 m (9 ft) in test hole 3a and 3.0 m (10 ft) in test hole 3b were analyzed for PCBs. Results of this testing indicate that PCBs were not detected in the soil samples at concentrations greater than 1 ppm, the lower test detection limit.

Soil samples 611-3a-3hm, 611-3a-6hm, and 611-3a-9hm were taken from depths of 0.9, 1.8, and 2.7 m (3, 6, and 9 ft), respectively, for total metals and TCLP analyses. These analyses were performed by Weston Environmental Metrics, Inc. The pH value for the soil samples was 4.9, 5.0, and 5.0, respectively. The results are presented in Table 2, along with the ingestion and inhalation cleanup objectives for total metals (mg/kg), and migration to Class I groundwater cleanup objectives for both pH-dependent total metals (mg/kg) and TCLP metals (mg/L), as determined for TACO Tier

1 standards for residential properties. NA = no toxicity criteria available for route of exposure. ND = not present above detection limit.

Table 2. Results of testing for total and TCLP metals at Beloit Corp.								
611-3a-3hm	Total metals (mg/kg)		TCLP metals (mg/L)		Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Class I GW: pH-dependent pH 4.75 to 5.24 (mg/kg)	Migration to Class I GW (mg/L)
Metal	Result	Detection limit	Result	Detection limit				
arsenic	ND	9.4	ND	0.1	0.4	750	26	0.05
barium	65.4	4.7	0.82	0.5	5,500	690,000	490	2.0
cadmium	ND	0.94	ND	0.05	78	1,800	1.7	0.005
chromium (total)	9.6	1.9	ND	0.05	390	270	62	0.1
lead	11.4	4.7	ND	0.05	400	NA	NA	0.0075
mercury	ND	0.05	ND	0.01	23	10	0.01	0.002
selenium	ND	9.4	ND	0.1	390	NA	17	0.05
silver	ND	0.94	ND	0.05	390	NA	0.33	0.05
611-3a-6hm	Total metals (mg/kg)		TCLP metals (mg/L)		Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Class I GW: pH-dependent pH 4.75 to 5.24 (mg/kg)	Migration to Class I GW (mg/L)
Metal	Result	Detection limit	Result	Detection limit				
arsenic	ND	9.2	ND	0.1	0.4	750	26	0.05
barium	35.6	4.6	ND	0.5	5,500	690,000	490	2.0
cadmium	ND	0.92	ND	0.05	78	1,800	1.7	0.005
chromium (total)	7.8	1.8	ND	0.05	390	270	62	0.1
lead	5.0	4.6	ND	0.05	400	NA	NA	0.0075
mercury	ND	0.04	ND	0.01	23	10	0.01	0.002
selenium	ND	9.2	ND	0.1	390	NA	17	0.05
silver	ND	0.92	ND	0.05	390	NA	0.33	0.05
611-3a-9hm	Total metals (mg/kg)		TCLP metals (mg/L)		Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Class I GW: pH-dependent pH 4.75 to 5.24 (mg/kg)	Migration to Class I GW (mg/L)
Metal	Result	Detection limit	Result	Detection limit				
arsenic	ND	9.3	ND	0.1	0.4	750	26	0.05

**Table 2. Results of testing for total and TCLP metals at Beloit Corp.**

611-3a-9hm	Total metals (mg/kg)		TCLP metals (mg/L)		Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Class I GW: pH-dependent pH 4.75 to 5.24 (mg/kg)	Migration to Class I GW (mg/L)
Metal	Result	Detection limit	Result	Detection limit				
barium	14.6	4.6	ND	0.5	5,500	690,000	490	2.0
cadmium	ND	0.93	ND	0.05	78	1,800	1.7	0.005
chromium (total)	7.1	1.9	ND	0.05	390	270	62	0.1
lead	4.9	4.6	ND	0.05	400	NA	NA	0.0075
mercury	ND	0.04	ND	0.01	23	10	0.01	0.002
selenium	ND	9.3	ND	0.1	390	NA	17	0.05
silver	ND	0.93	ND	0.05	390	NA	0.33	0.05

**611-4. Possible PCB site: Wisconsin Power and Light Co. electrical substation, northwest**  
**ant of Blackhawk Boulevard and Prairie Hill Road.** This substation contains several  
transformers and other electrical equipment. The facility is shown on aerial photographs from 1964  
present. The parcel was vacant in 1958 and contained farm buildings from at least 1939 through  
A soil sample was collected from a spot midway along the south fence of the facility opposite  
transformer (see Attachment 2C); at the time of collecting the sample on November 16, 1995,  
as was growing in this spot, though surrounding areas were covered with grass. Results of  
ing indicate that PCBs were not detected in the soil sample at concentrations greater than  
the lower test detection limit.

**5. Possible former UST site: Peterson Fruit Co./Hazenga Job Shop/Energy Dynamics,**  
**thwest quadrant of Blackhawk Boulevard and Prairie Hill Road (2228 Blackhawk**  
**rd).** This structure was closed when visited on November 16, 1995, and October 30, 1996.  
At least 1944 until 1966, this was the site of Peterson Fruit Co., according to City Directories  
Beloit Telephone Directories; the 1937 Beloit Telephone Directory lists 629 3rd Street, Beloit,  
as the address of Peterson Fruit Co. The building was vacant from 1967 to 1969, and then became  
Hazenga Job Shop machine shop (1970-1980) and Energy Dynamics Inc. machinists (1982-1985).  
It is listed in IMDs for 1982 through 1992 as Energy Dynamics Inc. (job shop; machine work,  
machinists, and machinery not elsewhere classified). Since 1992, it has been vacant or a residence  
according to City Directories. Aerial photographs show this building from 1958 to present. The  
facility contained a U-drive in 1979 and the parcel was vacant from 1939 through 1951, according  
to aerial photographs. This site is not contained on the October 31, 1996, UST list, the latest list  
available. A fireman with the South Beloit Fire Department, who has lived in the area all his life,  
stated on December 23, 1996, that this was formerly a small machine shop; he did not believe that  
this has ever been a gasoline station.

A magnetometer survey of the parcel was conducted on October 30, 1996; the survey area included  
that part of the parcel between the building and Blackhawk Boulevard from the southern leg of the  
former U-drive to the north edge of the parcel (see Attachment 2D). No significant magnetic  
anomalies were detected, other than the gas utility.

Because of the unknown nature of the last two businesses that occupied this building and the presence of a U-drive on one set of aerial photographs suggesting the possibility of fuel dispensing, two test holes were bored along Blackhawk Boulevard in front of the building. Test hole 611-5a was bored north of a driveway to a residence west of the building (between legs of the former U-drive), while hole 5b was bored north of the northern leg of the U-drive. Both holes were bored to a total depth of 2.7 m (9 ft). No VOCs were detected in either borehole in soil gas taken from depths of 0.9, 1.8, or 2.7 m (3, 6, or 9 ft).

**Site 611-6. Former UST/light industrial site: United Tool and Engineering Co., southeast quadrant of Prairie Hill Road and Dorr Road (4095 Prairie Hill Road).** This business manufacturers tools and equipment from sheet metal. During a tour of the facility with the manager, who stated that it was built in 1967, numerous large presses and cutting machines could be seen. The manager stated that, though they do perform some welding during the manufacturing process, no painting is done and no paints or solvents are kept on site. The business is listed in the Yellow Pages under Tool Makers. According to the October 31, 1996, UST list, the latest list available, the business has 0 tanks in an exempt status. Correspondence with Oscar Presley of the Roscoe Fire Department indicates that two USTs have been removed from this parcel. One was located at the rear of the building and was removed for an addition; the other was located beneath the parking lot. Discussion with the manager of the company revealed that the tank beneath the parking lot was at the eastern edge of the lot, about 61 m (200 ft) south of Prairie Hill Road (see Attachment 2E), and contained gasoline. Information received from the OSFM on November 1, 1996, indicates that this tank was a 12-year-old painted steel tank of 3,785-L (1,000-gal) capacity; OSFM records show that it was removed in 1987. Aerial photographs illustrate the current building from 1988 to present, a larger building in 1970 and 1979, and a very small building in 1958 and 1964; the parcel was agricultural from at least 1939 through 1951.

Test holes were probed along the south side of Prairie Hill Road to a total depth of 2.7 m (9 ft) (Attachment 2E). Hole 611-6a was located west of the driveway. No VOCs significantly above background levels were detected in soil gas taken from depths of 0.9 or 1.8 m (3 or 6 ft). However, gas taken from a depth of 2.7 m (9 ft), 20 ppm of total VOCs were detected. Use of the OVA chromatograph mode indicated that this was a VOC with a retention time similar to methane. Hole 6b was located east of the driveway. No VOCs significantly above background levels were detected in soil gas taken from depths of 0.9, 1.8, or 2.7 m (3, 6, or 9 ft).

**Site 611-7. LUST site: Prairie Hill Auto (Brake Realty and Custom Builders), southwest quadrant of Prairie Hill Road and Burlington-Northern Railroad tracks (4513 Prairie Hill Road [4613 Prairie Hill Road]).** This business was closed when visited on November 16, 1995, and October 30, 1996. Several 208-L (55-gal) drums observed in October 1995 at the rear of the south building were all empty, and none were labeled. A small AST on the west side of the southern building was also empty. The site is listed in IMDs from 1976 through 1978 as Leonhardt Eng. Co. (speaker systems, hi fi). Aerial photographs show the current buildings from 1964 to present; the parcel was agricultural from at least 1939 through 1958.

Under the name of Brake Realty at 4613 Prairie Hill Road, this is a LUST site according to the July 12, 1996, LUST list (IEMA No. 931802). Though this address is no longer valid, these names were on a sign leaning against a building at Prairie Hill Auto, and the LUST file for Brake Realty and Custom Builders shows a map of this site. This business is also listed on the October 31, 1996, UST list, the latest list available, as having one tank in an active status.

According to IEPA files, reviewed on January 2 and December 12, 1996, the LUST was discovered on July 6, 1993, when a 1893-L (500-gal) gasoline UST was removed from the site and determined to have corrosion holes. The State Fire Marshal's report indicated that minor contamination was detected in the floor and walls of the excavation. The report by the consultant, Environmental Contractors of Illinois, consultant to the company, indicates that contaminated soil was excavated to a depth of 1.8 m (6 ft) and transported to a registered landfill; no groundwater was encountered during the excavation process. Samples were then taken from the excavation and submitted to Analytical Laboratory Services for analysis of BTEX compounds; all samples were below detection limits, except for one in the north wall which had 3 ppb benzene. Based on these test results, IEPA issued a letter on January 18, 1994, indicating that no further remedial action was needed.

Two test holes were probed along the south side of Prairie Hill Road to a total depth of 2.7 m (9 ft) (see Attachment 2F). Test hole 611-7a was located west of the driveway. No VOCs significantly above background levels were detected in soil gas taken from a depth of 0.9 m (3 ft). However, in soil gas taken from a depth of 1.8 m (6 ft), 20 ppm of total VOCs were detected. No VOCs remained in the hole to inject into the column of the OVA, and it was not possible to obtain a sample of the sand and gravel at that depth. Therefore, the hole was carried to 2.7 m (9 ft), where 10 ppm of total VOCs were detected in soil gas. The OVA in gas-chromatograph mode indicated that this was a VOC with a retention time similar to methane, which means that the VOCs detected at 1.8 m (6 ft) were also methane.

Hole 611-7b was located east of the driveway. No VOCs significantly above background levels were detected in soil gas taken from depths of 0.9, 1.6, or 2.7 m (3, 6, or 9 ft).

**LUST site: Material Service Corporation (Northwind Concrete Products, L.L.C.), southwest quadrant of Prairie Hill Road and Burlington-Northern Railroad tracks (4633 Prairie Hill Road).** This parcel was identified by IDOT District 2 as being of possible concern to the project. It is a LUST site (IEMA No. 920144) on the July 12, 1996, LUST list. This company operates the quarry located between Rockton and Prairie Hill Roads. This facility also has four USTs in an active status on the October 31, 1996, UST list, the latest list available. According to a new employee at the site and also according to Mr. Dale Wieman, Operations Manager for Northwind Concrete Products, the tanks are located near the large buildings more than 500 m (1640 ft) south of the proposed ROW. Mr. Wieman stated that the USTs contain diesel fuel and are to be removed in 1998. This facility is listed in IMDs from 1982 through 1992 as a manufacturer of concrete pipe; it also may have been the site of Can-Tex Industries (1976-78) and Durgom Concrete Pipe Co. (1972). Aerial photographs show this facility from 1958 to present; the parcel was agricultural from at least 1939 through 1951.

According to IEPA files, reviewed on January 2, 1996, the LUST was discovered on January 2, 1992, and was caused by a leak in a distribution line that carried #2 fuel oil from the USTs to the plant boiler. It was estimated that about 38 L (10 gal) was released. Pyramid Construction of Rockford excavated soils to a depth of about 1.8 m (6 ft). Following excavation, HNu readings detected no VOCs in the excavation. A sample sent for analysis to Suburban Laboratories in Hillside, IL, revealed that all BTEX and PNA compounds were below IEPA cleanup objectives. On July 22, 1994, IEPA forwarded a letter to the company stating that no further remedial activities were necessary.

The tanks for this facility are located more than 229 m (750 ft) south of the project ROW. Therefore, no testing was conducted for this parcel.

**Site 611-8. Landfill site: Beloit Municipal Landfill, northwest quadrant of Prairie Hill Road and Dearborn Avenue (IL 251).** According to IEPA files, reviewed on January 2 and December 12,

1996, this parcel was the site of a gravel pit prior to 1946. From 1946 to 1975, the City of Beloit operated a sanitary landfill at the site. Aerial photographs show an active landfill here from 1958 through 1970; the parcel was agricultural in 1939 and had become a gravel pit by 1951. According to Mr. Jack Wright, owner of The Wright Brothers Used Cars which is built on the landfill, part of the gravel pit remains in the low area to the east on the west side of IL 251 (Dearborn Avenue). Pearl Lake to the north was also part of this former gravel pit.

Landfill operations ceased in October 1975. The property was sold to Mr. Wright in 1980, and two warehouses were constructed west of the site in the mid 1980s and early 1990s. In April 1994, high concentrations of methane were found in the area; the USEPA measured methane concentrations at 100% of the lower explosive limit (LEL) in the soils east of the Kerry Ingredients warehouse. Methane levels in the vicinity of The Wright Brothers Used Cars ranged from 2% to 10% LEL, while one taken in the ROW of Prairie Hill Road was 4% LEL. Along the gas-main trench between the warehouses and The Wright Brothers Used Cars, methane levels were intermediate, ranging up to 40-50% LEL. A letter from the City of Beloit to IEPA, dated February 6, 1995, discussed the City's intent to install a gas-management system at the landfill. This system would include 12 gas-extraction wells connected by about 366 m (1200 ft) of pipe, a blower to provide a pressure differential, and a flare to burn extracted gas. The system would be located on the west property line and would be a vapor-barrier system. Designed by Rust Environment & Infrastructure, consultant to the City, the gas management system assumes generation over the entire landfill in 1995 of 5 m<sup>3</sup> per minute [m<sup>3</sup>/m] (178 ft<sup>3</sup> per minute [cfm]) of methane and recovery at 80% (4 m<sup>3</sup>/m [142 cfm]). Because the system will operate only over 38% of the landfill, the expected emissions are 1.5 m<sup>3</sup>/m (54 cfm) of methane, 2.4 metric tons per year (2.65 short tons per year) of VOCs, and 0.4 metric ton per year (0.42 short ton per year) of CO. Several monitoring wells were to be installed as part of the gas management process. The well installed by the City of Beloit on the south side of Prairie Hill Road (described by Mr. Jack Lovejoy [site 611-9]) may be one of the monitoring wells to determine movement of gas beneath Prairie Hill Road to potentially endangered businesses along the south side. No further information was available in IEPA files.

Two test holes were bored to a depth of 2.7 m (9.0 ft) along the north side of Prairie Hill Road (see Attachment 2G. Hole 611-8a was probed southeast of The Wright Brothers Used Cars. Total VOCs were detected in soil gas from this hole at levels of 50 ppm (0.9 m [3 ft]), 30 ppm (1.8 m [6 ft]), and 70 ppm (2.7 m [9 ft]). Use of the OVA in gas-chromatograph mode indicated that the readings from soil gas at 0.9 and 1.8 m (3 and 6 ft) represented a VOC with a retention time similar to methane. No VOCs significantly above background levels were detected by the PGC in the headspace of a soil sample from 2.7 m (9 ft), indicating that the OVA reading reflected the presence of a VOC with a retention time similar to methane.

Hole 611-8b was probed to the east, near the eastern edge of the landfill. Total VOCs were detected in soil gas from this hole at levels of 40 ppm (0.9 m [3 ft]), 20 ppm (1.8 m [6 ft]), and 40 ppm (2.7 m [9 ft]). Use of the OVA in gas-chromatograph mode indicated that these readings also represented a VOC with a retention time similar to methane.

**Site 611-9. Commercial site: Jack's Tire Sales and Service, southeast quadrant of Prairie Hill Road and Burlington Northern Railroad tracks (4829 Prairie Hill Road).** Though the current business deals in sales and service of tires only, Mr. Jack Lovejoy, the owner, stated that it used to be a junkyard; he purchased the parcel in 1985 or 1986. Aerial photographs show the current building from 1979 to present and a junkyard from 1964 through 1970; the parcel was agricultural from at least 1939 through 1958. Mr. Lovejoy also noted that a monitoring well on the west side of the parcel was installed by the City of Beloit to monitor the landfill across the road.



New plans received from Mr. Larry E. Reed, IDOT District 2, on May 23, 1996, added additional proposed ROW along the south side of this parcel through the junkyard for construction of an access road to Dearborn Street. However, at the request of Ms. Robin Smith, IDOT District 2, testing was restricted to existing ROW along the south side of Prairie Hill Road (see Attachment 2H for location of holes). Test holes 611-9a and 9b were probed to a total depth of 2.7 m (9 ft). No VOCs significantly above background levels were detected in soil gas taken from depths of 0.9, 1.8, or 2.7 m (3, 6, or 9 ft) in either hole.

A soil sample taken from a depth of 0.6 m (2 ft) in test hole 9b was analyzed for PCBs. Results of this testing indicate that PCBs were not detected in the soil sample at concentrations greater than 1 ppm, the lower test detection limit.

**Site 611-10. Commercial site: Erickson Auto Parts and Sales, southwest quadrant of Prairie Hill Road and Dearborn Avenue (IL 251), (4917 Prairie Hill Road).** This large junkyard, which occupies land far to the south of Prairie Hill Road and west of Dearborn Avenue, has been a junkyard since the 1940s or 1950s, according to Mr. Wayne Erickson, the manager. The junkyard also included two structures to the east along Dearborn Avenue; these structures are now leased (see sites 11 and 12). Aerial photographs show a junkyard at this site extending about half way from Prairie Hill Road to the north-bound on-ramp onto IL 251 from Rockton Road from 1958 to present; the parcel was agricultural on photographs from 1939 through 1951.

Test hole 611-10a was probed to a depth of 2.7 m (9 ft) in existing ROW north of the western part of the building (see Attachment 2I for location of test holes). No VOCs significantly above background levels were detected in soil gas taken from depths of 0.9 or 1.8 m (3 or 6 ft). However, 60 ppm of total VOCs were detected in soil gas taken from a depth of 2.7 m (9 ft). Use of the OVA in gas-chromatograph mode indicated that this was a VOC with a retention time similar to methane.

Test hole 611-10b was probed to a depth of 2.7 m (9 ft) in existing ROW northeast of the building. More than 100 ppm of total VOCs were detected in soil gas taken from a depth of 0.9 m (3 ft); use of the OVA in gas-chromatograph mode indicated that this was a VOC with a retention time similar to methane. In soil gas taken from a depth of 1.8 m (6 ft), 50 ppm of total VOCs were detected; again the OVA in gas-chromatograph mode indicated this to be a VOC with a retention time similar to methane. No VOCs significantly above background levels were detected in soil gas taken from a depth of 2.7 m (9 ft).

A soil sample taken from a depth of 0.3 m (1 ft) in test hole 10b was analyzed for PCBs. Results of this testing indicate that PCBs were not detected in the soil sample at concentrations greater than 1 ppm, the lower test detection limit.

**Site 611-11. Commercial site: Building for rent (formerly A & H Customs), southwest quadrant of Prairie Hill Road and Dearborn Avenue (IL 251), (14444 South Dearborn Avenue).** Formerly Erickson's Auto Sales (used cars), this building was the site of a new business that had just opened when visited on November 16, 1995; however, the building was closed and for rent when visited during testing on October 30, 1996. Erickson's Auto Sales performed sales and service of used cars, and the parcel is located in close proximity to the large junkyard of site 10. Two test holes were probed at this site, 611-11a along the south side of Prairie Hill Road and 611-11b along the west side of Dearborn Avenue (see Attachment 2J). No VOCs significantly above background levels were detected in soil gas taken from 0.9 and 1.8 m (3 and 6 ft) in either borehole. However, in soil gas taken from a depth of 2.7 m (9 ft), 30 ppm of total VOCs were detected in borehole 11a and more

than 100 ppm in borehole 11b. Use of the OVA in gas-chromatograph mode indicated that these represented a VOC with a retention time similar to methane.

A soil sample taken from a depth of 0.3 m (1 ft) in test hole 11b was analyzed for PCBs. Results of this testing indicate that PCBs were not detected in the soil sample at concentrations greater than 1 ppm, the lower test detection limit.

**Site 611-12. Commercial site: Robinson's Brakes and Alignment, southwest quadrant of Prairie Hill Road and Dearborn Avenue (IL 251), (14440 South Dearborn Avenue).** Mr. Robinson, the proprietor of the current business, stated that he has leased this building since 1992 from Mr. Erickson (site 10). The business provides adjustment and repair of brakes and alignment systems. However, it was formerly part of the large junkyard to the west. Mr. Robinson stated that the building was built in 1987-88.

Two test holes were bored along the west side of Dearborn Avenue (see Attachment 2K). Hole 611-12a was probed in existing ROW between driveways at the east edge of the parcel. No VOCs significantly above background levels were detected in soil gas taken from depths of 0.9 and 2.7 m (3 and 9 ft). However, 70 ppm of total VOCs was detected in soil gas taken from a depth of 1.8 m (6 ft). Use of the OVA in gas-chromatograph mode indicated that this represented a VOC with a retention time similar to methane.

Hole 611-12b was probed near the southeast corner of the parcel in existing ROW. No VOCs significantly above background levels were detected in soil gas taken from 0.9 m (3 ft). However, 20 ppm of total VOCs was detected in soil gas from 1.8 m (6 ft), while 90 ppm was detected in soil gas from 2.7 m (9 ft). Use of the OVA in gas-chromatograph mode indicated that these represented a VOC with a retention time similar to methane.

A soil sample taken from a depth of 0.6 m (2 ft) in test hole 12a was analyzed for PCBs. Results of this testing indicate that PCBs were not detected in the soil sample at concentrations greater than 1 ppm, the lower test detection limit.

**Site 611-13. Commercial site: Bill King's Used Cars, west side of Dearborn Avenue (IL 251 access road) south of Prairie Hill Road (14396 South Dearborn Avenue).** According to Mr. Bill King, the owner, this business was built in 1954. The small building on the south side of the parcel was formerly a gasoline and service station on the corner of Gardner Street and Blackhawk Boulevard, far to the north in South Beloit; it was moved to this site to serve as an office for the used-car business. The diesel dispenser at the front of this small building is also just decorative. Though the business currently performs only sales and body work, it performed extensive engine servicing and replacement during the 1970s. It is also in close proximity to the large junkyard of site 10.

Two test holes were bored along the west side of Dearborn Avenue (see Attachment 2L). Hole 611-13a and 13b were probed to total depths of 2.7 m (9 ft) in existing ROW north and south of the driveway to the business. No VOCs significantly above background levels were detected in soil gas taken from depths of 0.9 and 1.8 m (3 and 6 ft) in hole 13a or from 0.9, 1.8, and 2.7 m (3, 6, and 9 ft) in hole 13b. In hole 13a, 70 ppm of total VOCs were detected in soil gas taken from a depth of 2.7 m (9 ft). This was determined to be a VOC with a retention time similar to methane using the OVA in gas-chromatograph mode.

A soil sample taken from a depth of 0.6 m (2 ft) in test hole 13b was analyzed for PCBs. Results of this testing indicate that PCBs were not detected in the soil sample at concentrations greater than 1 ppm, the lower test detection limit.

**Site 611-14. Commercial site: Bud Whitt's Used Cars, west side of Dearborn Avenue (IL 251 access road) south of Prairie Hill Road (14354 South Dearborn Avenue).** Mr. Bud Whitt, the owner, stated that service is performed on cars sold here. Oil from oil changes is stored in 208-L (55-gal) drums.

Two test holes were bored to a total depth of 2.7 m (9 ft) in existing ROW along the west side of Dearborn Avenue (see Attachment 2M). Hole 611-14a was probed to a total depth of 2.7 m (9 ft) north of the driveway. No VOCs significantly above background levels were detected in soil gas taken from depths of 0.9 and 1.8 m (3 and 6 ft). However, 30 ppm of total VOCs was detected in soil gas from a depth of 2.7 m (9 ft); this was determined to be a VOC with a retention time similar to methane using the OVA in gas-chromatograph mode.

Hole 611-14b was probed to a total depth of 2.7 m (9 ft) south of the driveway. No VOCs significantly above background levels were detected in soil gas taken from depths of 0.9 and 1.8 m (3 and 6 ft). A total of 30 ppm VOCs was detected in soil gas taken from a depth of 2.7 m (9 ft); this was determined to be a VOC with a retention time similar to methane using the OVA in gas-chromatograph mode.

**Site 611-15. Commercial site: Dearborn Collision/Pagano Auto Body, west side of Dearborn Avenue (IL 251 access road) south of Prairie Hill Road (14192 South Dearborn Avenue).** Mr. Mike Pagano, Jr., the proprietor, stated that he leases this facility from his father, who owns Pagano's Auto Sales to the north. It used to be a body shop, and now services automobiles for Pagano's Auto Sales. Waste oil is stored in a 208-L (55-gal) drum, which is taken to Erickson's Auto Parts and Sales (site 10), where the oil is burned in a waste-oil burner for heat.

Two test holes were bored to a total depth of 2.7 m (9 ft) in existing ROW along the west side of Dearborn Avenue (see Attachment 2N). Hole 611-15a was probed north of the driveway, while 15b was probed south of the driveway. No VOCs significantly above background levels were detected in soil gas taken from depths of 0.9, 1.8, and 2.7 m (3, 6, and 9 ft) in either borehole.

**Site 611-16. UST/spill site: Ruan Leasing Co., west side of Dearborn Avenue (IL 251 access road) between north-bound on and off ramps of IL 251 (13850 South Dearborn Avenue).** Mr. John Scovill, the manager, stated that this business has been here since about 1981, renting and leasing trucks. A 37,854-L (10,000-gal) steel UST containing diesel fuel is located on the south side of the building. The facility is listed in the IEPA Incident Database for South Beloit as having spilled diesel fuel (IEMA No. 930964). Information received from the IEPA Office of Chemical Safety on December 6, 1995, and December 17, 1996, indicated that approximately 76 L (20 gal) of diesel fuel was discharged on April 17, 1993, apparently during fueling of a truck when the dispenser nozzle failed to shut off. No additional information was available from IEPA. Aerial photographs show the buildings from 1970 to present; the parcel was agricultural from at least 1939 through 1958 and vacant in 1964.

Two test holes were bored to a total depth of 2.7 m (9 ft) along the west side of Dearborn Avenue (see Attachment 2O). Hole 611-16a was probed north of the driveway and 16b south of the driveway. No VOCs significantly above background levels were detected in soil gas taken from depths of 0.9, 1.8, and 2.7 m (3, 6, and 9 ft) in either test hole.

Because of the presence of an UST containing diesel fuel and the occurrence of a spill of diesel fuel at the site, soil samples taken from depths of 0.9 and 2.7 m (3 and 9 ft) from test hole 16a and from depths of 0.9 and 2.7 m (3 and 9 ft) from test hole 16b were analyzed using a Petro-Risc immunoassay kit. Results of this analysis indicate that petroleum products were not detected in concentrations greater than 10 ppm, the lower detection limit.

**Site 611-17. Former UST site: Lehigh Portland Cement Co., west side of Dearborn Avenue (IL 251 access road) at north-bound off ramp of IL 251 (13700 South Dearborn Avenue).** This facility was closed when visited on November 16, 1995, and remained closed when visited again for testing on October 31, 1996. Built in 1963, it was the distribution terminal to receive Portland cement shipped from Indiana. The cement, arriving in covered hopper cars, was unloaded into the two silo-type storage bins. The cement was then loaded into semi-trailer trucks and shipped to area plants and highway paving jobs. Aerial photographs show this facility from 1964 to present; the parcel was agricultural from at least 1939 through 1958. According to Mr. John Scovill of site 18, it has been inactive since 1991 and is used by Ruan to park equipment.

Though no USTs were observed at the site, it is listed under the name St. Mary's Peerless Cement Co. on the October 31, 1996, UST list, the latest list available, as having 0 tanks in a closed status. Information received from the OSFM on November 1, 1996, indicates that a 25-year-old bare steel UST of 30,283-L (8,000-gal) capacity, formerly containing diesel fuel, was removed from the site in August 1989; its former location is not known.

Two test holes were bored to a total depth of 2.7 m (9 ft) along the west side of Dearborn Avenue (see Attachment 2P). Hole 611-17a and 17b were probed just east of a fence surrounding the structure. No VOCs significantly above background levels were detected in soil gas taken from depths of 0.9, 1.8, and 2.7 m (3, 6, and 9 ft) in either test hole.

Because of the former presence of an UST containing diesel fuel, soil samples taken from a depth of 2.7 m (9 ft) from test holes 17a and 17b were analyzed using a Petro-Risc immunoassay kit. Results of these analyses indicate that petroleum products were not detected in concentrations greater than 10 ppm, the lower detection limit.

**Site 611-18. Former UST site: R.B.R. Trucking, Inc., northwest quadrant of Rockton Road and IL 251 (4950/4968 Rockton Road).** This business, built in 1982 according to the manager, hauls freight and is listed in the Yellow Pages under Trucking—Motor Freight. Service is performed on the trucks in the large building near Rockton Road and the proposed ROW along IL 251. Aerial photographs show the current buildings only in 1994; operations buildings for a gravel pit shown on the topographic map (see Attachment 1B) are contained on 1988 photographs, and farm buildings were present from at least 1939 through 1979.

This was formerly the site of Shieler Construction Co., Inc., (4968 Rockton Road). This business is listed on the October 31, 1996, UST list, the latest list available, as having three tanks in an active status. According to records received from the OSFM on November 1, 1996, the site had a total of three USTs. One was a 37,854-L (10,000-gal) tank containing diesel fuel and two were 2,120-L (560-gal) tanks containing gasoline. The tanks were removed by Pyramid Petroleum Equipment in January 1994. The manager of the business stated that they were located in a gravel area on the northeast side of the southern building (see Attachment 2Q).

Two test holes were bored to a total depth of 2.7 m (9 ft) along the west side of IL 251 at the base of the fill for the bridge over Rockton Road (see Attachment 2Q). Both holes were probed adjacent

to the former location of USTs and encountered asphalt pavement for the former Dearborn Avenue at depths of 0.5 to 0.6 m (1.8 to 2 ft). In soil gas taken from a depth of 0.9 m (3 ft) from hole 611-18a, 20 ppm of total VOCs were detected; however, no VOCs significantly above background levels were detected in the headspace of a soil sample from this depth, indicating that the VOCs detected represented a VOC with a retention time similar to methane. No VOCs significantly above background levels were detected in soil gas taken from depths of 1.8 and 2.7 m (6 and 9 ft).

More than 100 ppm of total VOCs were detected in soil gas taken from a depth of 0.9 m (3 ft) in test hole 611-18b; use of the OVA in gas-chromatograph mode indicated that this represented a VOC with a retention time similar to methane. No VOCs significantly above background levels were detected in soil gas taken from depths of 1.8 and 2.7 m (6 and 9 ft).

Because of the former presence of USTs containing diesel fuel, soil samples taken from depths of 0.9 and 2.7 m (3 and 9 ft) in test hole 18a and from a depth of 2.7 m (9 ft) in test hole 18b were analyzed using a Petro-Risc immunoassay kit. Results of these analyses indicate that petroleum products were not detected in concentrations greater than 10 ppm, the lower detection limit.

**Site 611-19. Former landfill/UST/commercial site: Waste Management, Inc., NW¼ of Section 21, T46N, R2E (13125 North 2nd Street).** This is a transfer station, where municipal waste is brought in trucks, recyclables are removed, and nonrecyclable waste is transported to a landfill. Aerial photographs show the facility from 1970 to present; the parcel was agricultural from at least 1939 through 1964. The business was A.A.A. Disposal/A.A.A. Transfer from 1974 to January 1991. It was initially a disposal area; the transfer station was built in 1984. During the 1970s, many liquid wastes were dumped into a lagoon at the facility. Waste Management is listed on the October 31, 1996, UST list, the latest list available, as having five tanks in an active status; they are located behind the combined maintenance-office building.

According to IEPA files, reviewed on January 2 and December 12, 1996, this facility was cited in February 1994 for operating a Class V Injection Well through a floor drain that emptied into the septic system. It was later discovered that the floor drain emptied into a holding tank, not a septic system. In May 1994, a 37,854-L (10,000-gal) UST containing diesel fuel was removed from the site. The Fire Marshal stated that the soils in the excavation were contaminated by "something other than petroleum" and that he smelled solvents. Monitoring wells on the site showed contamination with VOCs. IEPA documents indicate the intention to name Waste Management a PRP to the Evergreen Manor Superfund site about 1.6 km (1 mi) southwest. A soil sample taken by Rust Environment and Infrastructure of Naperville, consultant to the company, was analyzed for VOCs using IEPA Method 8260; no VOCs were detected. No further information was available from IEPA files.

Two holes were tested for VOCs. Hole 611-19a was located near the northwest corner of the parcel, while hole 611-19b was located near the southwest corner (see Attachment 2R). No VOCs significantly above background levels were detected in soil gas taken from 0.9 and 2.7 m (3 and 9 ft) in test hole 19a. However, 20 ppm of total VOCs were detected in soil gas from 1.8 m (6 ft); use of the OVA in gas-chromatograph mode indicated that this represented a VOC with a retention time similar to methane.

No VOCs significantly above background levels were detected in soil gas taken from 1.8 m (6 ft) from test hole 19b. However, 30 ppm of total VOCs were detected in soil gas taken from 0.9 m (3 ft), and 40 ppm of total VOCs were detected in soil gas taken from 2.7 m (9 ft). Use of the OVA in gas-chromatograph mode indicated that these readings represented a VOC with a retention time similar to methane.

**Site 611-20. Former UST/RCRA site: Ecolab, Inc., southeast quadrant of Rockton Road and IL 251 east of Burlington-Northern Railroad track (5151 Rockton Road).** Ecolab manufactures cleaning supplies for lodging, food service, dairy, and food processing businesses. Founded in 1931 as Klenzade, it moved to this site in 1960. This facility is listed in IMDs as Klenzade Products from 1966 to 1972 and as Economics Laboratory, Inc., Equipment Engineering Div., from 1976 to 1978. Aerial photographs show this building from 1958 to present; the parcel was agricultural from at least 1939 through 1951. According to Diane Fleming, the receptionist, only equipment is manufactured here; cleaning chemicals are not. Company literature states that the South Beloit Operation is the "global source of chemical dispensing equipment." According to the October 31, 1996, UST list, the latest list available, 0 tanks are registered at this site in an exempt status. Mr. Richard D. Ferguson, Senior Process Engineer, stated in October 1996 that the UST was located behind the garage on the eastern side of the parcel (see Attachment 2S) and that it contained gasoline. OSFM records, received on November 1, 1996, indicate that the tank had a capacity of 37,854 L (10,000 gal) and contained diesel fuel. A copy of a letter from Empire Limestone Co. of Wisconsin, Inc., obtained from Mr. Ferguson, stated that the underground gasoline storage tank was removed in June 1987.

According to IEPA files, examined on January 2 and December 12, 1996, the facility formerly was listed in a generator status of more than 1000 kg (2205 lb) per month. Former waste streams included trichloroethylene. Having reduced its waste streams, Ecolab is currently listed as a small quantity generator (between 100 and 1000 kg [221 and 2205 lb] per month). Current waste streams include sulfuric acid, sodium hydroxide, hydrochloric acid, glass bead, grinding dust, waste paint thinner, waste paint solid, and waste oil. Further information was not available from IEPA files.

The Waste Management and Research Center database indicates that this facility contains an inactive surface impoundment, formerly used for disposal. Unknown wastes disposed of were moderately hazardous (6 on a scale of 0-9). Potential for seepage and endangerment to current water supplies is also moderate. Discussion with Mr. Ferguson revealed that there were two impoundments, both located 91-122 m (300-400 ft) south of the building.

Two test holes were bored to a total depth of 2.7 m (9 ft) along the south side of Rockton Road near the former UST site (see Attachment 2S for location). Test hole 611-20a was probed west of the eastern driveway, while 611-20b was probed east of that driveway. No VOCs significantly above background levels were detected in soil gas taken from either hole from depths of 0.9, 1.8, and 2.7 m (3, 6, and 9 ft).

**Site 611-21. PCB/spill site: Wisconsin Power and Light, East Rockton Substation, south side of Rockton Road east of Metric Drive.** This substation contains several transformers and was surrounded by power company construction equipment when visited on November 16, 1995. Aerial photographs show this station by 1964; the area was agricultural from at least 1939 through 1958. It is listed in the IEPA Incident Database (IEMA No. 871537). Information received on December 6, 1995, from IEPA's Office of Chemical Safety indicates that PCB-contaminated oil leaked from a capacitor on August 7, 1987. The spill was confined to the area inside of the perimeter fencing and was removed by excavating contaminated soil. Testing performed by IEPA in September 1987 following cleanup detected PCBs in concentrations ranging from less than 1 to 1400 ppm. The high concentration was detected in a soil sample from immediately beneath the leaking capacitor. Based on these test results, the IEPA notified the power company on November 4, 1987, that the IEPA cleanup objectives had been met and that no further action was required.

A soil surface sample was collected by compositing soils from the area near the center of the northern fence and from around the base of a light pole on the north side to test for PCBs (see

Attachment 2T for location of sample). Results of this testing indicate that PCBs were not detected in the soil sample at concentrations greater than 1 ppm, the lower test detection limit.

**Site 611-22. Former UST/RCRA/spill/light industrial site: Regal-Beloit Corporation, north side of Rockton Road east of Metric Drive (5404 Rockton Road).** Regal-Beloit, founded in 1955 east of Beloit, WI, manufactures cutting tools; operations include machine tooling, parts washing, and coating. Listed in the yellow pages under Tools-Cutting, this site is cutting tool group headquarters (Regal cutting tools, New York twist drills, National twist drills).

The Rockton Road plant was constructed in 1959. The business is listed in IMDs from 1966 through 1992 under the category of power transmission components and expendable cutting tools. Aerial photographs show buildings present here from at least 1964; the parcel was agricultural from at least 1939 through 1958.

Mr. Seymour of Dale's Welding along Metric Road referred to an antifreeze spill of 757 L (200 gal) here; no information concerning this possible spill could be found in IEPA files. However, the facility is listed on the IEPA Incident Database as having illegally buried sodium cyanide (IEMA Incident No. 840483). According to information received from IEPA's Office of Chemical Safety on December 6, 1995, IEPA was notified by an anonymous caller ("high-level executive") on May 14, 1984, that the company had been disposing of 680 kg (1500 lbs) of sodium cyanide each year for the past 22 years in a septic tank leach field on company property. Discussion with Mr. Robert Wengrow of IEPA's Beloit office revealed that Regal-Beloit used the material in a heat-treatment process, which released most of the cyanide to the atmosphere under a discharge permit. Wastewater was discharged to the septic system, located between the Rockton Road ROW and the buildings north of the highway. Testing at that time by IEPA detected less than 0.5 ppm of cyanide in the septic tank leach field. IEPA decided this discharge constituted no hazard and closed the case; Regal-Beloit ceased using sodium cyanide in the manufacturing process in late 1984.

The facility is listed on the October 31, 1996, UST list, the latest list available, as having 0 tanks in empty status. Information received from the OSFM on November 1, 1996, indicates that there were formerly four USTs at this facility, all steel, three having a capacity of 5,678 L (1,500 gal), and one having a capacity of 3,785 L (1,000 gal). The contents of these tanks was lubricating oil, mineral oil, cutting oil, and used oil and water. Employees at the site stated that the tanks were located in the northeastern quadrant of the parcel. OSFM records indicate that four tanks were removed in 1987. Though OSFM records contain no information concerning the fifth tank, they do state that no USTs remain at the site. According to IEPA files, examined on January 2 and December 12, 1996, the facility generates waste trichloroethylene during parts washing; waste is stored in a 280-L (55-gal) drum and picked up every 5-6 months by Safety Kleen. No further information was available from IEPA files.

Two test holes were bored to a total depth of 2.7 m (9 ft) along the north side of Rockton Road (see Attachment 2U for location). Test hole 611-22a was probed in front of the western building. No VOCs significantly above background levels were detected in soil gas taken from depths of 0.9 and 1.8 m (3 and 6 ft). However, 20 ppm of total VOCs were detected in soil gas taken from a depth of 2.7 m (9 ft); this was determined to be a VOC with a retention time similar to methane, using the OVA in gas-chromatograph mode.

Test hole 611-22b was probed to a total depth of 2.7 m (9 ft) in front of the eastern building. No VOCs significantly above background levels were detected in soil gas taken from a depth of 0.9 m

(3 ft). However, 10 ppm of total VOCs were detected in soil gas taken from 1.8 m (6 ft), and 20 ppm was detected in soil gas taken from a depth of 2.7 m (9 ft). Use of the OVA in gas-chromatograph mode determined that the shallower reading was a VOC with a retention time similar to methane. No VOCs significantly above background levels were detected in the headspace of a soil sample taken from a depth of 2.7 m (9 ft), indicating that the reading taken with the OVA represented a VOC with a retention time similar to methane.

Soil sample 611-22a-6hm was taken from a depth of 1.8 m (6 ft) for total metals and TCLP analyses. These analyses were performed by Weston Environmental Metrics, Inc. The pH value for the soil sample was 6.6. The results are presented in Table 3, along with the ingestion and inhalation cleanup objectives for total metals (mg/kg), and migration to Class I groundwater cleanup objectives for both pH-dependent total metals (mg/kg) and TCLP metals (mg/L), as determined for TACO Tier 1 standards for residential properties. NA = no toxicity criteria available for route of exposure. ND = not present above detection limit.

**Table 3. Results of testing for total and TCLP metals at Regal-Beloit Corp.**

611-22a-6hm	Total metals (mg/kg)		TCLP metals (mg/L)		Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Class I GW: pH-dependent pH 6.25 to 6.64 (mg/kg)	Migration to Class I GW (mg/L)
	Result	Detection limit	Result	Detection limit				
benic	ND	8.7	ND	0.1	0.4	750	29	0.05
m	8.4	4.3	ND	0.5	5,500	690,000	1,500	2.0
m	ND	0.87	ND	0.05	78	1,800	5.2	0.005
ium (al)	6.7	1.7	ND	0.05	390	270	40	0.1
	ND	4.3	ND	0.05	400	NA	NA	0.0075
	ND	0.04	ND	0.01	23	10	0.89	0.002
	ND	8.7	ND	0.1	390	NA	6.3	0.05
silver	ND	0.87	ND	0.05	390	NA	4.4	0.05

#### Other potential man-made hazards

**LUST site: J. H. McIntyre, 710 Blackhawk Boulevard, South Beloit.** This parcel was identified by IDOT District 2 as being of possible concern to the project. The addresses along Blackhawk Boulevard in the project ROW are 2131 to 2228. The McIntyre parcel is many blocks north of the project ROW, and no testing was conducted for this parcel.

**LUST site: Illinois State Tollway Authority, One Toll Plaza, South Beloit.** This toll plaza was identified by IDOT District 2 as being of possible concern to the project. It is listed on the October 31, 1996, UST list as having 0 tanks in a closed status. At milepost 75, this is located about 1.2 km (0.75 mi) south of Rockton Road. It is a LUST site (IEMA Nos. 920870 and 920591). According to IEPA files, reviewed on January 2, 1996, these two IEMA numbers refer to the same LUST incident. Because of its distance from the proposed project, no testing was conducted at this site.



**Asbestos-containing materials.** Evidence from aerial photographs indicates that many residences in the 800-m corridor west of the Rock River were built prior to 1958; many farms were built prior to 1939. Residences along the south side of Prairie Hill Road between Beloit Bridge and Iron and Prairie Hill Auto lie in the proposed new ROW and will presumably be demolished; aerial photographs show that they were present as early as 1958. Therefore these buildings may have friable asbestos-containing materials as a component of floor tiles, wall and pipe insulation, roof materials, patching or painting compounds, ceiling materials, or stove and furnace insulation.

### **Natural Hazards**

**Wetlands.** Table 4 shows the locations of wetlands in the project area; these are based on the National Wetlands Inventory for Illinois and the Wisconsin Wetlands Inventory. These wetlands maps were defined primarily by aerial photographs, which may reflect conditions specific to the year or season that the photography was completed. Therefore, wetlands areas may be either overstated or missing entirely.

Table 2. Wetlands in the project corridor.	
Location	Type of wetland
<b>ILLINOIS</b>	
T46N, R1E, Section 12, SE¼, along Rock River	seasonal, forested, broad-leaved deciduous palustrine
"	aquatic bed, semipermanent palustrine
"	emergent, seasonal palustrine
T46N, R2E, Section 15, SW¼, at Coltec	permanent, open-water, excavated palustrine
<b>WISCONSIN</b>	
T1N, R12E, Sections 28-29	palustrine, wet-soil, emergent/wet meadow, persistent, grazed (used for pasturing livestock)
T1N, R12E, Section 16	wet-soil palustrine, emergent/wet meadow, persistent
T1N, R12E, Section 16	wet-soil palustrine, scrub/shrub, broad-leaved deciduous

**Floodplains.** Portions of the project area at the northwestern corner in Wisconsin are located in the 100-year and 500-year floodplain along an unnamed tributary to the East Fork of Raccoon Creek. Sections of the project area that cross the Rock River in Illinois are also located in the 100- and 500-year floodplain. Rockton Road near the eastern end of the project crosses the 100-year floodplain of Dry Creek. Flooding, standing water, and saturated soils may be encountered in these areas, particularly during periods of high or extended rainfall or spring snowmelt.

No other observed or known natural hazards were identified for this project.

FINDINGS

1. A CERCLIS (NPL) site (Beloit Corporation, Site 611-3), a landfill (Beloit Municipal Landfill, Site 611-8), and two large industrial sites (Ecolab, Inc., Site 611-20, and Regal Beloit Corporation, Site 611-22) are located along the project area. No VOCs, other than one with a retention time similar to methane, were detected in soil gas or the headspace of soil samples from these or the other sites tested. No petroleum hydrocarbons were detected in soil samples from three sites tested for this project. No PCBs were detected in soil samples from nine sites tested. See text for details.
2. Many residences and farms in the 800-m corridor west of the Rock River and many residences along the south side of Prairie Hill Road between Beloit Bridge and Iron and Prairie Hill Auto may have friable asbestos-containing materials as a component of construction materials. Further investigation into the presence of asbestos-containing materials may be desired if building modification or demolition is to occur.
3. Portions of the project area in Wisconsin are located in the 100-year and 500-year floodplain along an unnamed tributary to East Fork Raccoon Creek; sections of the project area in Illinois are also located in the 100- and 500-year floodplain of the Rock River and the 100-year floodplain of Dry Creek. Flooding, standing water, and saturated soils may be encountered in these areas, particularly during periods of high or extended rainfall or spring snowmelt.

ENDORSEMENTS

Project Manager:

C. Brian Trask / ALE

C. Brian Trask

Date: 1/6/97

Approved:

Anne H. Erdmann

Anne Erdmann

Date: 1/6/97

## INFORMATION SOURCES

### Bibliography

Beloit Daily News. (1986). Book of Beloit II: 1836-1986.

Beloit telephone directories. (1989/90, 1980, 1965, 1963, 1956, 1937).

Berg, R.C., Kempton, J.P., and Stecyk, A.N. (1984). Geology for planning in Boone and Winnebago Counties. Illinois State Geological Survey, Circular 531, 69 p.

Erdmann, A. L., Bauer, R. A., Bannon, P. L., and Schneider, N. P. (1996). A manual for conducting preliminary environmental site assessments for Illinois Department of Transportation highway projects. Illinois State Geological Survey Open File Series 1996-5, 40 p.

Hayes, Mrs. W. (1967). Our golden history, South Beloit, Illinois, its history and legends, 1835-1967. "Golden Days" Committee, South Beloit, 124 p.

Illinois Environmental Protection Agency (Summer 1989). Cleaning Illinois, status of the state's hazardous waste clean-up programs.

Illinois Environmental Protection Agency, Division of Land Pollution Control (March 1995). Companies that Generate, treat, dispose or recover hazardous waste, 1993 annual report.

Illinois Environmental Protection Agency (July 1995). Summary of annual reports on hazardous waste, generation, treatment, storage, disposal, and recovery, 1993 (selected pages).

Otto, S., Michaud, G., and Morse, J. (1988). An investigation of volatile organic chemical contamination in groundwater near Rockton, Illinois. Illinois Environmental Protection Agency, Division of Land Pollution Control, PB88 239-959/A6.

Polk City Directories, Beloit, Wisconsin (1995, 1993, 1990, 1980, 1970, 1964, 1960, 1954).

Soil Survey of Winnebago and Boone Counties, Illinois (1980). University of Illinois College of Agriculture, Agricultural Experiment Station in cooperation with the Soil Conservation Service, U.S. Department of Agriculture.

Soil Survey of Rock County, Wisconsin (1972). University of Wisconsin Department of Soil Science, Wisconsin Geological and Natural History Survey, Wisconsin Agricultural Experiment Station in cooperation with Soil Conservation Service, U.S. Department of Agriculture.

Treworgy, C. G. et al. (September 1, 1989). Evaluation of the potential for damage from subsidence of underground mines in Illinois. Illinois State Geological Survey.

U.S. Department of Agriculture, Soil Conservation Service (September 1, 1991). Prime farmlands, important farmlands. U.S. Government Printing Office.

U.S. Environmental Protection Agency (May 31, 1992). Summary of criminal prosecutions resulting from environmental investigations. National Enforcement Investigations Center, Denver, Colorado.

Wehrmann, H. A. (1984). An investigation of a volatile organic chemical plume in northern Winnebago County, Illinois. Illinois Department of Energy and Natural Resources Document No. 84/09.

Willman, H.B., et al. (1975). Handbook of Illinois Stratigraphy, Illinois State Geological Survey, Bulletin 95.

Wisconsin Department of Natural Resources (February 1992). Wisconsin Wetland Inventory Classification Guide, PUBL-WZ-WZ023.

### **Government Lists**

Hazardous Waste Research and Information Center: Comprehensive Inventory of Special Waste Handlers, Inventory of Land-Based Waste Disposal Sites, Inventory and Assessment of Surface Impoundments, Comprehensive Environmental Response and Liability Information System (CERCLIS).

Illinois Commerce Commission, Railroad Section (1989-1993). Annual reports.

Illinois Environmental Protection Agency, Division of Land Pollution (October 24, 1994). Illinois manufactured gas sites.

Illinois Environmental Protection Agency, Division of Land Pollution (August 1995). State underground injection control inventory.

Illinois Environmental Protection Agency, Division of Public Water Supplies (February 13, 1996). Groundwater monitoring raw source location report.

Illinois Environmental Protection Agency, Division of Public Water Supplies (October 1996). Restricted status list—public water supplies.

Illinois Environmental Protection Agency (October 1992). Hazardous waste disposal sites.

Illinois Environmental Protection Agency (July 1, 1992). IEPA issued generic landfill applications.

Illinois Environmental Protection Agency (October 1995). IEPA permitted storage, treatment, recycling, incinerating, transfer station, and processing facilities.

Illinois Environmental Protection Agency (July 12, 1996). Leaking underground storage tank (LUST) incident reports.

Illinois Environmental Protection Agency, Office of Chemical Safety (1972-June 1996). Incident database.

Illinois Environmental Protection Agency (August 1996). Semi-annual hazardous waste update report.

Illinois Environmental Protection Agency (September 1995). Solid waste landfills subject to state surcharge.

- Illinois Environmental Protection Agency (May 1989). Solid waste site list.
- Illinois Environmental Protection Agency (January 1, 1990). Special waste site list.
- Illinois Environmental Protection Agency (December 15, 1992). Unpermitted landfills.
- Illinois State Museum, Geography Program, Historical Hazards GIS (1883-1950). Site history report on coal gas works.
- Illinois State Water Survey (March 1993). Public water supply database, draft.
- Natural Resources Conservation Service, Soil Survey Database (May 3, 1995). Prime farmland.
- Office of the State Fire Marshal (October 31, 1996). Underground storage tank (UST) list.
- Public Groundwater Supply Report, Illinois State Water Survey (November 1988). Winnebago County.
- QUESTOR Database, Illinois State Geological Survey and The Ultimate Software Consultants (TUSC).
- U.S. Department of Agriculture, Natural Resources Conservation Service (May 3, 1995). Section II technical guide, hydric soil interpretations.
- U.S. Department of Agriculture, Soil Conservation Service (1992). Hydric soils list.
- U.S. Environmental Protection Agency Superfund web site. Current waste sites (CERCLIS) - November 7, 1996; archived waste sites (CERCLIS Archive) - November 7, 1996; Records of Decision (RODS); September 30, 1994.
- U.S. Environmental Protection Agency (May 4, 1995). Hazardous waste site database. Received from Wisconsin Department of Natural Resources.
- U.S. Environmental Protection Agency, National Technical Information Service (1987-1993). Toxic release inventory for Illinois.
- Wisconsin Corrective Action Facilities (April 20, 1995).
- Wisconsin Department of Industry, Labor and Human Relations (June 6, 1995). DILHR Online database, underground storage tank (UST) list.
- Wisconsin Department of Natural Resources, Bureau of Public Water Supply (May 5, 1995). Public water supply inventory report.
- Wisconsin Department of Natural Resources, Bureau of Solid and Hazardous Waste PILOT BBS (July 1, 1995). List of active leaking underground storage tank (LUST) sites.
- Wisconsin Department of Natural Resources, Bureau of Solid and Hazardous Waste PILOT BBS (1978-May 1995). List of hazardous waste spills.

Wisconsin Department of Natural Resources, Bureau of Solid and Hazardous Waste PILOT BBS (June 1993). List of waste disposal sites in Wisconsin.

### **Maps**

Berg, R. C., Kempton, J. P., and Cartwright, K. (1984). Potential for contamination of shallow aquifers in Illinois. Illinois State Geological Survey, Circular 532, 30 p., 2 plates

Berg, R.C., and Kempton, John P. (1987). Stack unit mapping of geologic materials in Illinois to a depth of 15 meters. Illinois State Geological Survey, Circular 542, Stack Unit Map of Northern Illinois.

Chadwyck-Healey Inc., Sanborn Fire Insurance maps, Illinois, Rockton.

DeLorme Mapping, Map Expert (1993). Street map, Beloit, Rockton, South Beloit, Victory Heights, and Christilla Heights.

Federal Emergency Management Agency, National Flood Insurance Program, Flood Insurance Rate Map (FIRM):

Rock County Unincorporated, Wisconsin, 1983

City of South Beloit, Illinois, 1984

Village of Rockton, Illinois, 1981

Winnebago County Unincorporated, Illinois, 1980.

Herzog, Beverly, L., et al. (1994). Buried bedrock surface of Illinois. Illinois State Geological Survey.

Keefer, D. A., and Berg, R. C. (1990). Potential for aquifer recharge in Illinois (appropriate recharge areas). Illinois State Geological Survey.

Killey, M.M., Hines, J.K. and DuMontelle, P.B. (1984). Illinois Landslide inventory map. Illinois State Geological Survey.

Lineback, J.A. (1979). Quaternary deposits of Illinois. Illinois State Geological Survey.

Mudrey, M. G., Jr., Brown, B. A., and Greenburg, J. K. (1982). Bedrock geologic map of Wisconsin.

Piskin, K., and Bergstrom, R. E. (1975 reprinted 1994). Glacial drift in Illinois: thickness and character. Illinois State Geological Survey, Circular 490.

Radbruch-Hall, D. H., Colton, R. B., Davies, W. E., Skipp, B. A., Lucchitta, I., and Varnes, D. J. (1976). Preliminary landslide overview map of the conterminous United States. U.S. Geological Survey, Miscellaneous Field Studies Map MF-771, scale 1:7,500,000.

Rockford Map Publishers, Plat Maps.

Rock County, Wisconsin: 1951, 1960, 1964, 1970, 1973, 1976, 1978, 1981, 1984, 1987, 1989, 1992

Winnebago County, Illinois: 1935, 1941, 1946, 1957, 1967, 1969, 1972, 1974, 1976, 1979, 1981, 1991.

Seismic Risk Map of the United States (1991). Uniform Building Code, edition by International Building Officials.

U.S. Fish and Wildlife Service, Office of Biological Services, National Wetlands Inventory Maps, base: U.S. Geological Survey Topographic Map, Beloit Quadrangle; Belvidere NW Quadrangle, aerial photographs, May 1981; South Beloit Quadrangle, aerial photographs, November, 1980, printed 1987.

U.S. Geological Survey, Topographic Map, 1:24,000 (7.5-minute) series.

Beloit Quadrangle: 1962; 1962 photo revised 1971; 1962 photo revised 1971 and 1976.  
Belvidere NW Quadrangle, 1993, 1970 photo revised 1975, 1970.  
South Beloit Quadrangle, 1993, 1971 photo revised 1976, 1971, 1959.

University Publications of America, Sanborn Map Company Archives, Sanborn Fire Insurance maps, Illinois, South Beloit.

University Publications of America (1959.). Sanborn Map Company archives. Sanborn Fire Insurance maps, Illinois, Rockton.

Willman, H.B. (1967). Geologic map of Illinois. Illinois State Geological Survey.

Wisconsin Geological and Natural History Survey (April 1981). Bedrock geology of Wisconsin.

Wisconsin Geological and Natural History Survey, Land Resource Analysis Program (1976). Glacial deposits of Wisconsin, sand and gravel resource potential.

Wisconsin Geological and Natural History Survey. Preliminary map showing thickness of glacial deposits in Wisconsin.

Wisconsin Waste Disposal Sites, Beloit, Rock County (June 1993).

### **Photographs**

#### **Markhurd photographs:**

1993: Line 26, photographs 591, 592; Line 27, photographs 591, 592, 593; Line 28, photographs 591, 592, 593  
1988: Line 26, photographs 591, 592; Line 27, photographs 591, 592, 593; Line 28, photographs 591, 592, 593

#### **U.S. Department of Agriculture:**

1979: 179-55, 56, 57, 58, 59, 60  
1970: BXL-ILL-189, 190, 191  
1964: 1EE-83, 84, 85, 86  
1958: 2V-155, 156, 157, 158, 159; 1V-144, 145, 146, 147  
1951: 2H-25, 26, 27, 28, 29  
1939: 4-29, 27, 36, 37, 38; 3-67, 68, 69

Other

Brent, S. (May 9, 1995). Air Division, Wisconsin Department of Natural Resources, personal communication.

Cobb, Rick, Manager (August 1, 1996). Illinois Environmental Protection Agency, Bureau of Water, Groundwater Section, personal communication.

Forrestal, Jim (May 8, 1995). Rock County Planning Office, personal communication.

Goin, Thomas, Jr. (September 29, 1995). Illinois Emergency Management Agency, Springfield, written correspondence.

Hamilton, Dean (September 26, 1995). Illinois Commerce Commission, Railroad Section, personal communication.

Krill, R. M. (May 5, 1995). Wisconsin Department of Natural Resources, Bureau of Water Supply, written correspondence.

Lynch, Larry (May 8, 1995). Mine Reclamation Division, Wisconsin Department of Natural Resources, personal communication.

## Conversations with:

Cathy Baner, employee, Demeter, Inc.  
 Clerk, South Beloit City Hall.  
 Employee, Plibrico Sales & Service Co.  
 Employee, Taylor Design, Inc.  
 Wayne Erickson, manager, Erickson Auto Parts & Sales.  
 Diane Fleming, receptionist, Ecolab, Inc.  
 Marlene Gelsinger, owner, Da-Mar's Equipment Co.  
 Bill King, owner, Bill King's Used Cars.  
 Jack Lovejoy, owner, Jack's Tire Sales & Service.  
 Manager, R.B.R. Trucking, Inc.  
 Manager, United Tool & Engineering Co.  
 Steven Mason, president, Beloit Bridge & Iron Co.  
 Laveme McCurdy, owner, The Top Die Casting Co.  
 Mr. McGuire, owner, McGuire Bros. Auto Body.  
 Office manager, White Bros. Trucking Co., Inc.  
 Owner, Crabtree Sand Prairie Auto Parts & Car Sales, Inc.  
 Owner, Del Insko Stables, Inc.  
 Mike Pagano, Jr., son of owner, Pagano's Auto Sales, owner, AM Auto Sales Auto Body.  
 Pete, owner, O's Small Engine Sales & Service.  
 Receptionist, FMD Electronics/Coltec Industries.  
 Receptionist, Inlander-Steindler Paper Co.  
 Receptionist, Lefthander Chassis.  
 Receptionist, Regal-Beloit Corp.  
 Receptionist, State Line Foundries, Inc.  
 Receptionist, Waste Management, Inc.  
 John Scovill, manager, Ruan Leasing Co.  
 Dale Seymour, owner, Dale's Welding.



Ron Stollard, plant superintendent, Cretex Pressure Pipe, Inc.

Warehouse manager, Kerry Ingredients.

Bud Whitt, owner, Bud Whitt's Used Cars.

Dale Wieman, operations manager, Northwind Concrete Products, L.L.C. (Material Service Corp.)

Jack Wright, owner, The Wright Bros. Used Cars.

Telephone conversations with:

Fireman, South Beloit Fire Department.

Ron Graber, Wisconsin Power and Light.

## APPENDIX A

## ISGS PRELIMINARY ENVIRONMENTAL PROPERTY ASSESSMENT CHECKLIST

IDOT: P92-050-94ISGS: 611County: Winnebago, Illinois; Rock, WisconsinNearest City/Town: Beloit, Rockton, Roscoe, South BeloitLocation Coordinates: T1N, R12E, Sections 21, 28, and 33 Length: 5 km (3 mi)T46N, R1E, Sections 1, 2, 11, and 12T46N, R2E, Sections 7, 8, 9, 15, 16, 17, 18, 20, 21, and 22

IDOT District Contact:

Name: Robin SmithPhone: (815) 284 - 5460ISGS Lead: Brian Trask

## PROJECT CHECKLIST

## Pre-field Checklist:

Task	Status*	Date	By
Material Copied:	MIF	2/17/94	PLB
Topographic Map(s):	MIF	4/21/95	NIC
al Topographic Map(s):	MIF	5/4/95	NIC
n:			
at Topographic Map(s):	MIF	5/8/95	NIC
ical Topographic Map(s):	MIF	5/8/95	NIC
jects in Vicinity (Illinois):	MIF	5/4/95	NIC
jects in Vicinity (Wisconsin)::	NF	5/4/95	NIC
Wisconsin & Illinois):			
rt.	MIF	5/2/95	NIC
Phone Directory	NF	5/2/95	NIC
Chicagoland Atlas	NA	5/2/95	NIC
Illinois Geologic Maps and Publications:			
Soil Survey/ Soil Maps	MIF	4/21/95	NIC
Hydric Soils List	MIF	4/21/95	NIC
Non-Prime Farmland Soils List	MIF	4/21/95	NIC
Related Geologic Publications	NF	5/3/95	NIC
Piskin Drift Thickness Map	MIF	5/3/95	NIC
Herzog Buried Bedrock Surface Map	MIF	5/3/95	NIC
Berg and Kempton/ NIPC Stack Unit Map	MIF	5/3/95	NIC
Willman Geologic Map	MIF	5/3/95	NIC

Task	Status*	Date	By
Wisconsin Geologic Maps and Publications:			
Soil Survey/ Soil Maps	MIF	6/22/95	NIC
Hydric Soils List	MIF	6/22/95	NIC
Prime Farmland Soils List	MIF	6/22/95	NIC
Glacial Drift Thickness Map	MIF	6/22/95	NIC
Glacial Deposits Map	MIF	6/22/95	NIC
Bedrock Geologic Map	MIF	6/22/95	NIC
Illinois Hydrogeologic Information:			
Questor Database/Well logs	MIF	5/11/95	NIC
Surficial Public Water Supplies	NF	5/4/95	NIC
GWM Location Report for Public Water Supply Wells	MIF	5/5/95	NIC
IEPA Restricted Status List	MIF	5/4/95	NIC
IEPA Well Site Survey Reports	MIF	5/5/95	NIC
Groundwater Recharge Map	MIF	9/9/96	CBT
Potential for Aquifer Contamination Map	MIF	9/9/96	CBT
Aerial Photographs:	MIF	12/6/96	CBT
Sanborn Fire Insurance Maps (Illinois):			
Chadwyck-Healey Inc.	NF	5/5/95	NIC
University Publications of America	NF	5/5/95	NIC
Sanborn Fire Insurance Maps (Wisconsin):	NF	11/14/95	CBT
Plat Maps (Illinois):	MIF	5/4/95	NIC
Plat Maps (Wisconsin):	MIF	6/23/95	NIC
UST List (Illinois):	MIF	11/25/96	CBT
UST List (Wisconsin):	MIF	12/09/96	CBT
LUST List (Illinois):	MIF	11/25/95	CBT
LUST List (Wisconsin):	MIF	12/10/96	CBT
CERCLIS List (Illinois):	MIF	12/9/96	CBT
CERCLIS List (Wisconsin):	NF	12/9/96	CBT
IEPA Semi-Annual Hazardous Waste Update Report:	MIF	5/1/95	NIC
Inventory of Waste Handling Facilities (IWHF) Notebook:	MIF	5/1/95	NIC
Wisconsin Hazardous Waste Site List:	MIF	7/6/95	NIC
IEMA Hazardous Material Spill Information:	MIF	9/29/95	JRO
Wisconsin Hazardous Waste Spill Database:	MIF	7/6/95	NIC
IEPA Incident Database:	MIF	5/2/95	NIC
HWRIC Information:	MIF	5/8/95	NIC
Toxic Release Inventory:	MIF	5/2/95	NIC

Task	Status*	Date	By
Injection Well Inventory:	MIF	5/3/95	NIC
Coal Gasification Sites:	NF	5/3/95	NIC
Illinois Manufacturers Directories:	MIF	12/18/95	CBT
Illinois Services Directories:	MIF	12/18/95	CBT
Industry Hazardous Materials:	NA	12/18/95	CBT
ICC Contacted re: 1994 Railroad Spills:	NF	9/26/95	JRO
Annual Reports of 1989-1993 Railroad Spills:	NF	5/3/95	NIC
IDOT Contacted re: Abandoned Railroads:	NA	9/11/95	CBT
County Collection:	MIF	5/5/95	NIC
City Directories:	MIF	11/14/95	CBT
Mined-Out Area Maps:	NF	5/3/95	NIC
Abandoned Mined Lands Reclamation:	NA	5/3/95	NIC
ISGS Mine Notes and Mine Maps:	NA	5/3/95	NIC
Subsidence Potential:	NA	5/3/95	NIC
Seismic Risk Zone (Illinois):	MIF	5/3/95	NIC
Seismic Risk Zone (Wisconsin):	MIF	6/23/95	NIC
Landslide/Slumping Potential (Illinois):	MIF	5/3/95	NIC
Landslide/Slumping Potential (Wisconsin):	MIF	6/23/95	NIC
Flood Insurance Rate/Flood Hazard Boundary Map (Illinois):	MIF	5/3/95	NIC
Floodway Map (Wisconsin):	MIF	6/23/95	NIC
National Wetlands Inventory (Illinois):	MIF	5/3/95	NIC
National Wetlands Inventory (Wisconsin):	MIF	6/23/95	NIC
IDOT District Environmental Coordinator Contacted:	yes	4/96	CBT

\* MIF = Material in file, NF = Nothing found, NA = Not applicable, N/A = Not available

Historical Survey Completed By: N. J. Caldwell/C. B. Trask

Date: December 10, 1996

## APPENDIX B

## Initial Field Survey Checklist

IDOT NO. P92-050-94  
ISGS NO. 611

Date: 11/13-17/95  
By: C.B.Trask

ITEM	YES	NO	UNK	COMMENT
<b>FLORA/FAUNA</b>				
Vegetation present	X			
Vegetation stressed		X		
Animal activity or presence	X			
<b>NATURAL FEATURES AND CONDITIONS</b>				
Depressions	X			gravel pits
Mounding or soil piles		X		
Wetlands, ponds, lakes	X			
Rivers, streams, creeks	X			Rock R., Dry Ck.
Lagoons, surface impoundments	X			retention ponds
Soil discoloration		X		
Water discoloration		X		
<b>CULTURAL FEATURES AND CONDITIONS</b>				
Buildings/structures	X			
Landfills	X			Comment 1
Industry	X			Comment 2
Asbestos source/presence			X	
Storage tanks (above or underground)	X			Comment 3
Pumps/protruding pipes		X		
Drums	X			Prairie Hill Auto
Railroad spurs/tracks/ROW	X			Burlington-Northern
Dead end roads/trails	X			
Sewer lines	X			
Water wells	X			Private wells
Monitoring wells	X			Beloit Corp.
Septic tanks	X			Comment 4
Pits/quarries	X			Material Service Corp.
Solid waste (garbage)		X		
Transformers/substations	X			Wisconsin Power & Light
<b>AMBIENT ENVIRONMENTAL CONDITIONS</b>				
Unusual or noxious odors		X		
Noise pollution		X		
Dust/smoke		X		

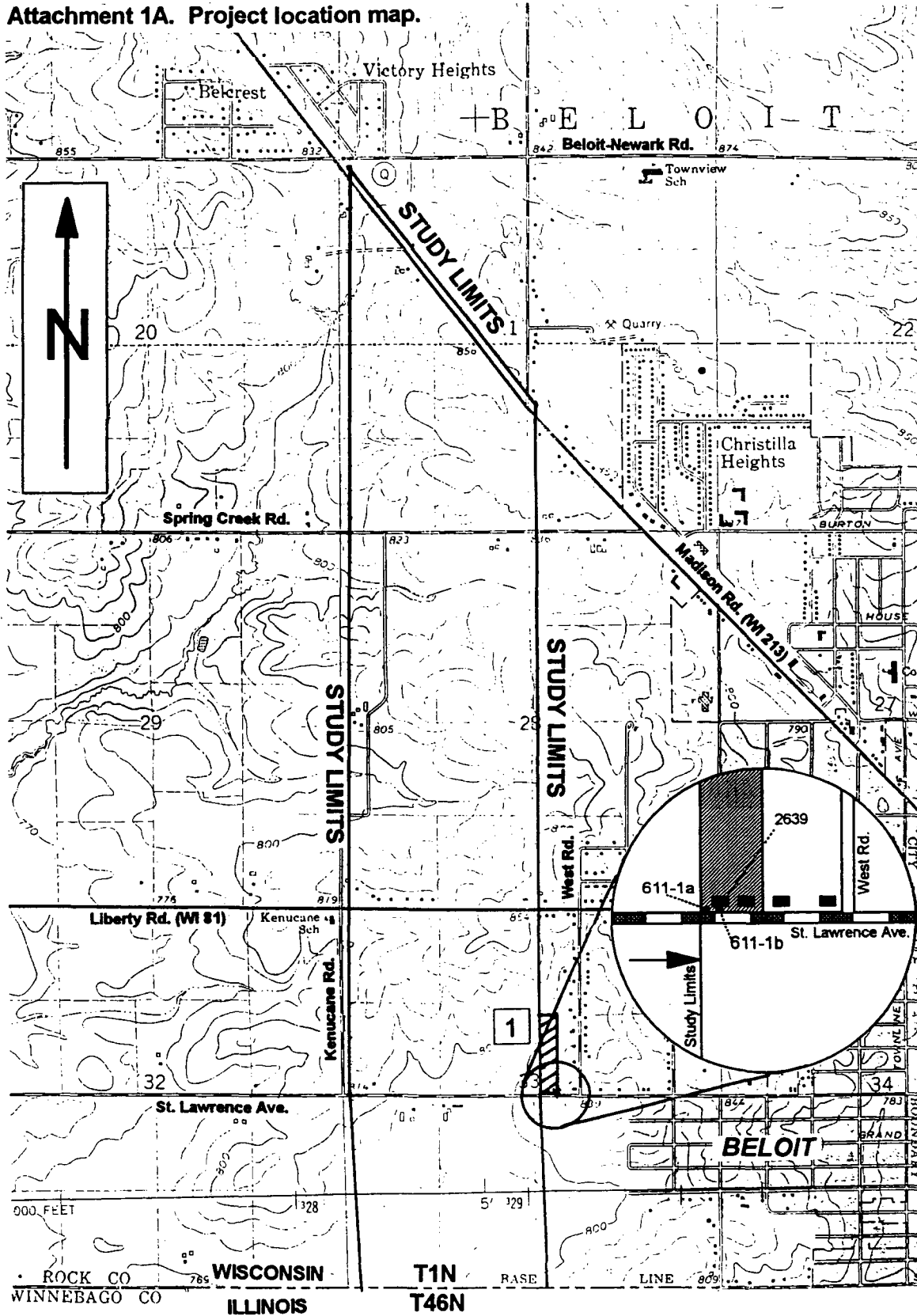
**COMMENTS:**

1. Beloit Municipal, Waste Management (A.A.A.)
2. Regal-Beloit Corp., Beloit Corp., United Tool & Equipment
3. Ruan Leasing Co., Cretex Pressure Pipe, Material Service Corp.
4. Regal-Beloit Corp., Ecolab, others along Prairie Hill Road and Rockton Road.

**LIST OF ATTACHMENTS**

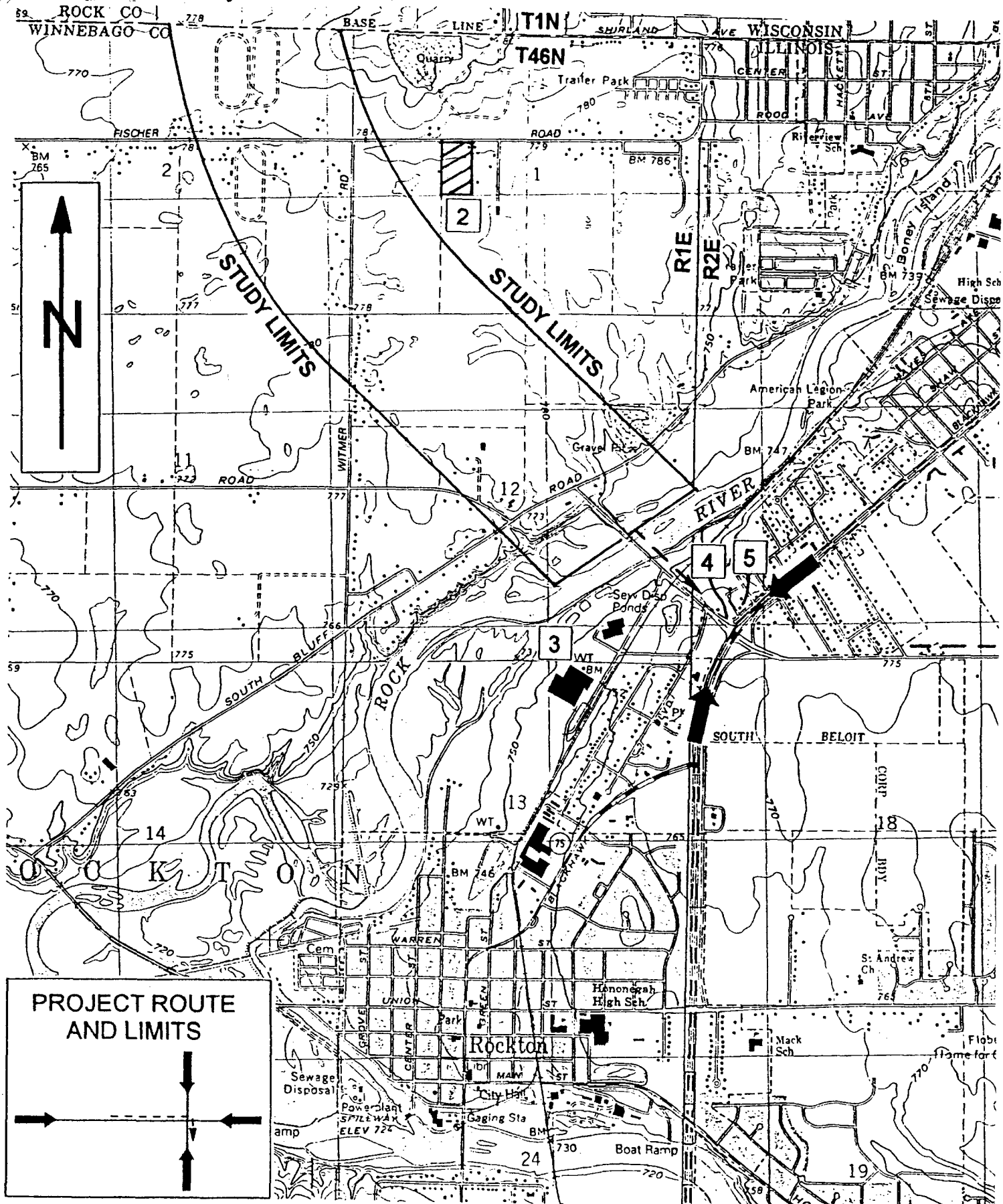
1. Project location map.
2. Maps and photographs showing locations of test holes and surface samples.
3. Results of testing for volatile organic compounds.

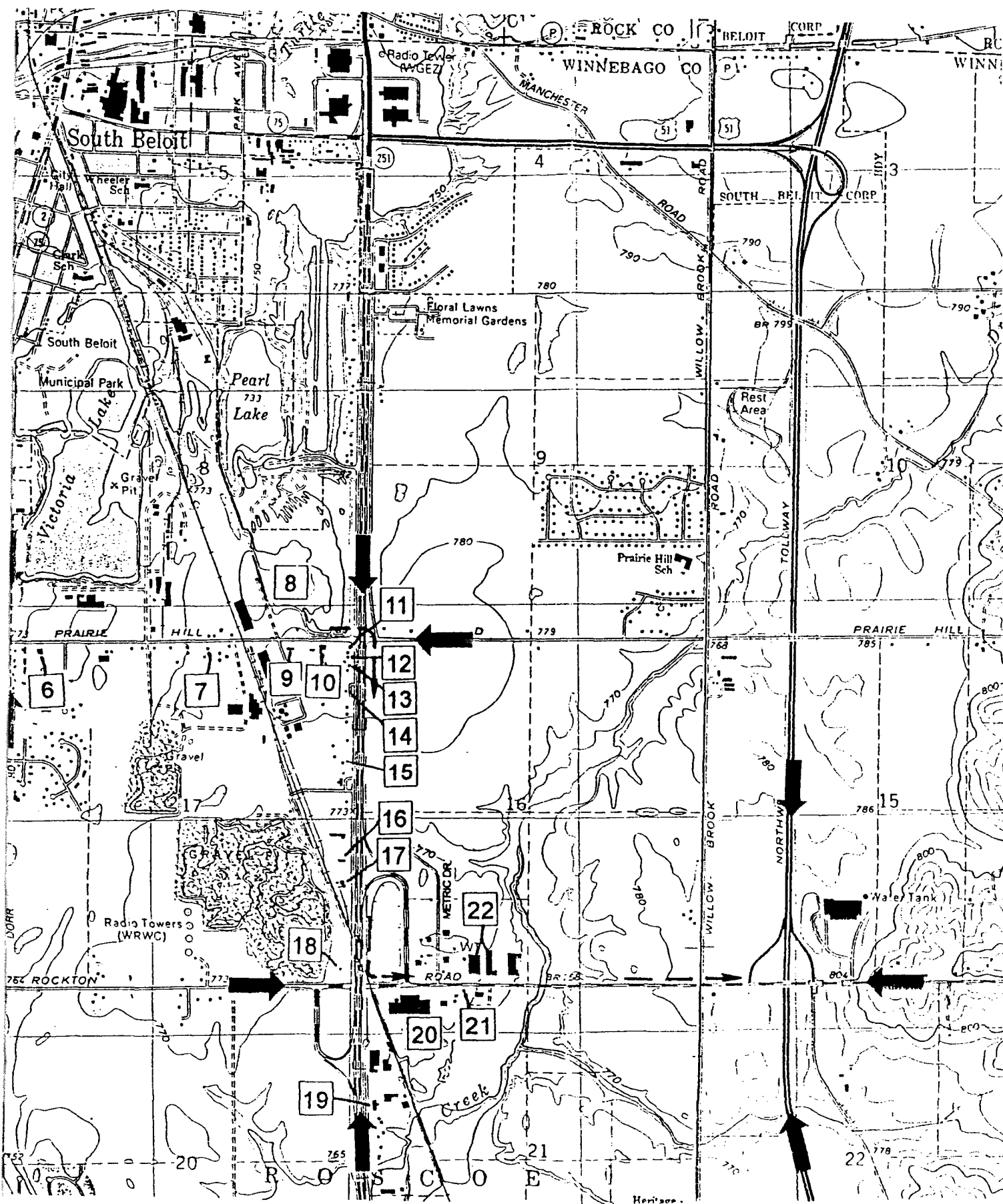
Attachment 1A. Project location map.



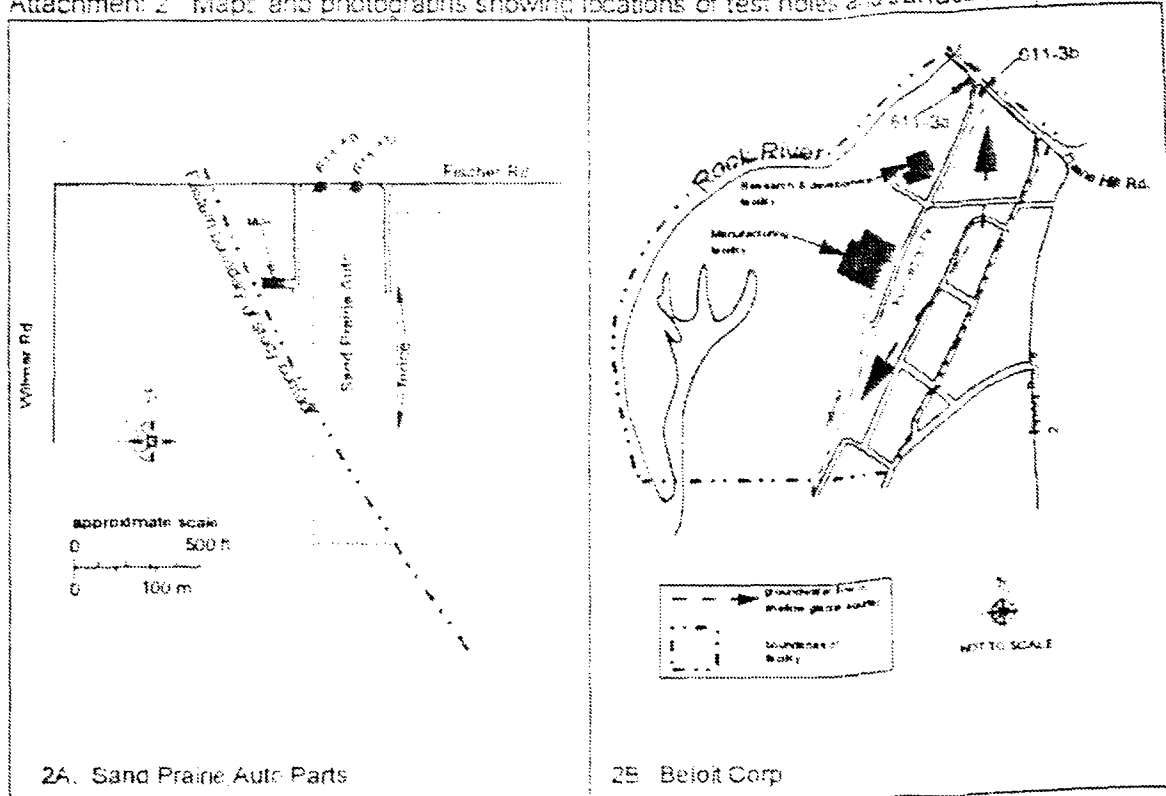


# Attachment 1B. Project location map.



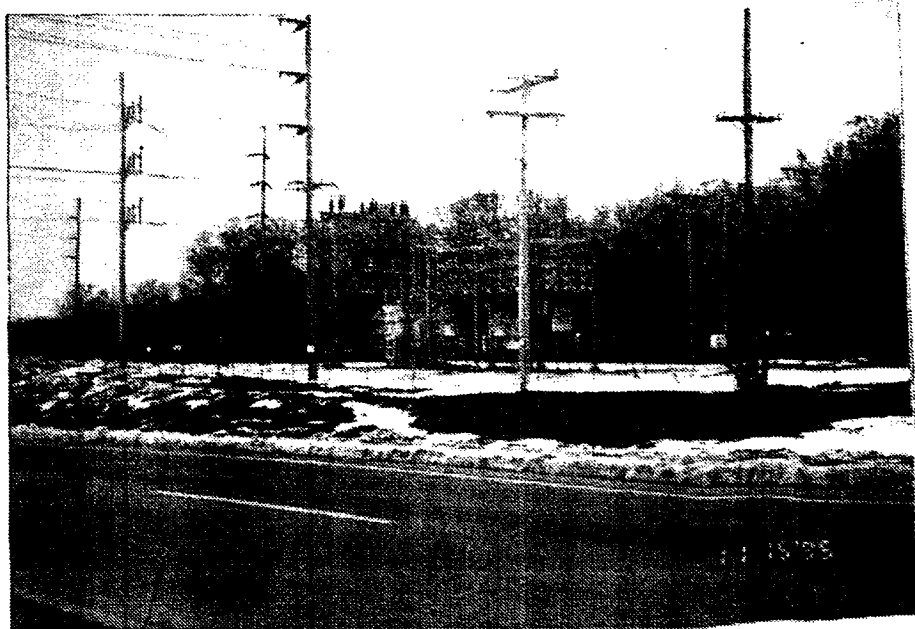


Attachment 2 Maps and photographs showing locations of test holes and surface samples.



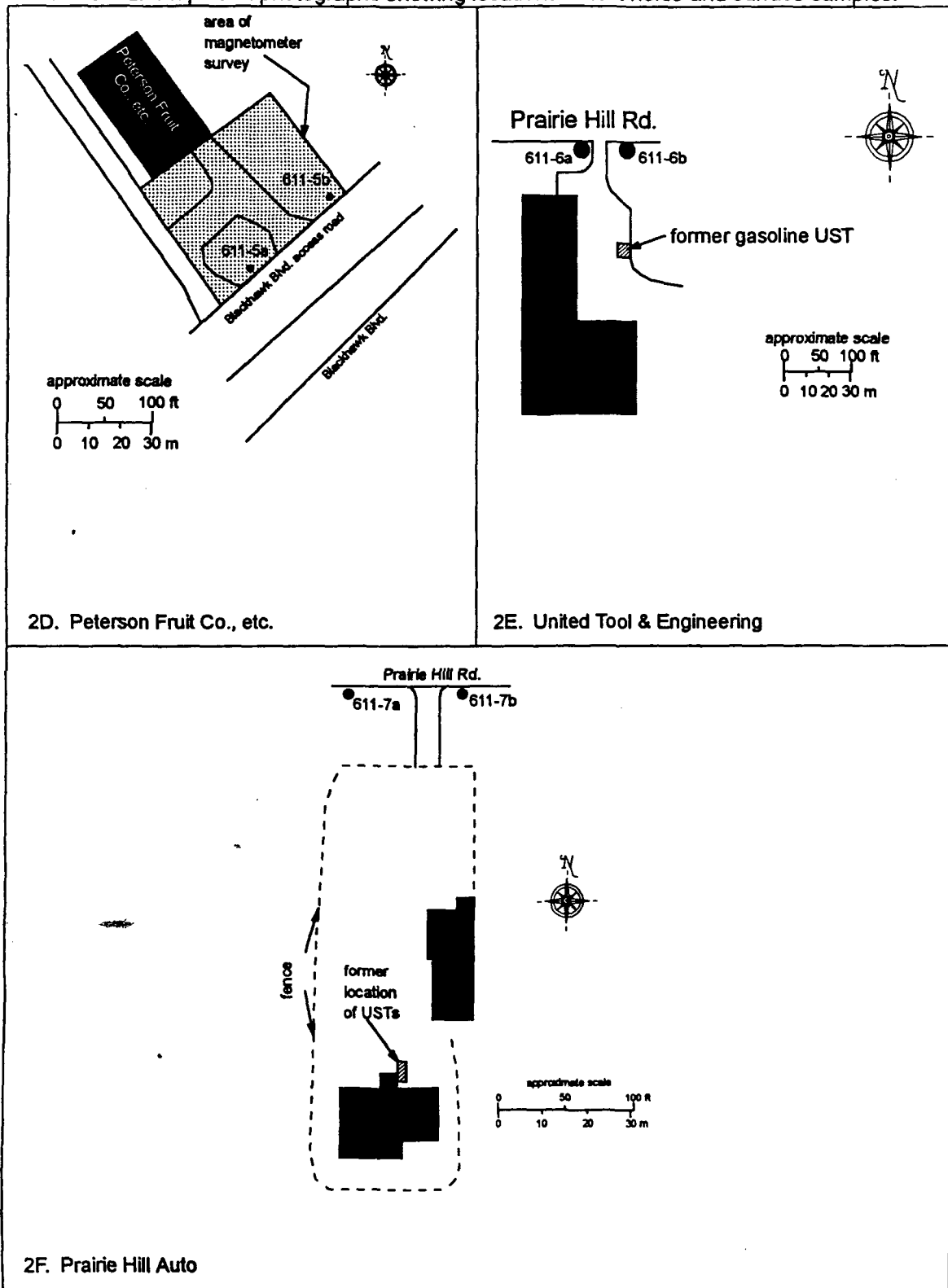
2A. Sand Prairie Auto Parts

2B. Beloit Corp

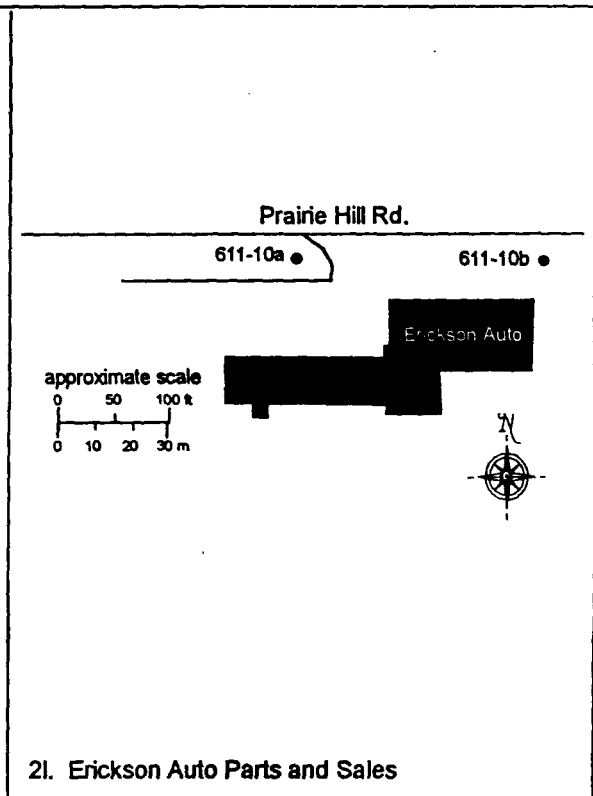
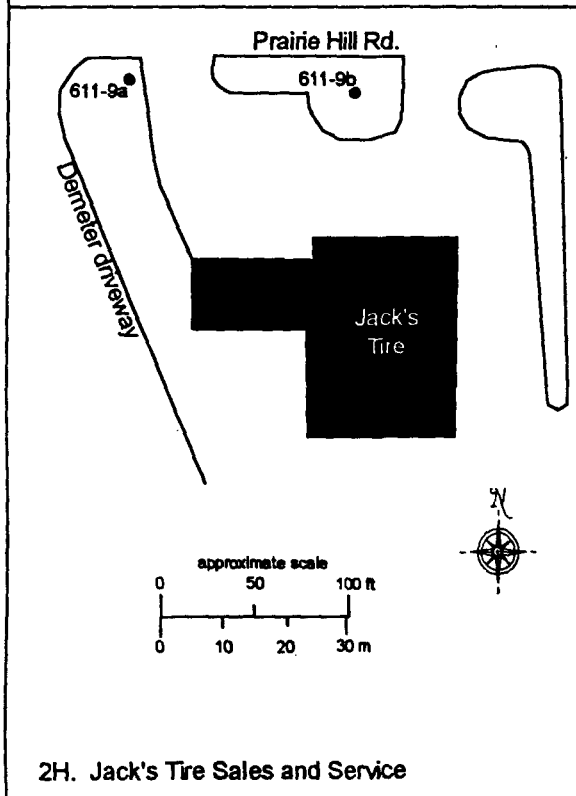
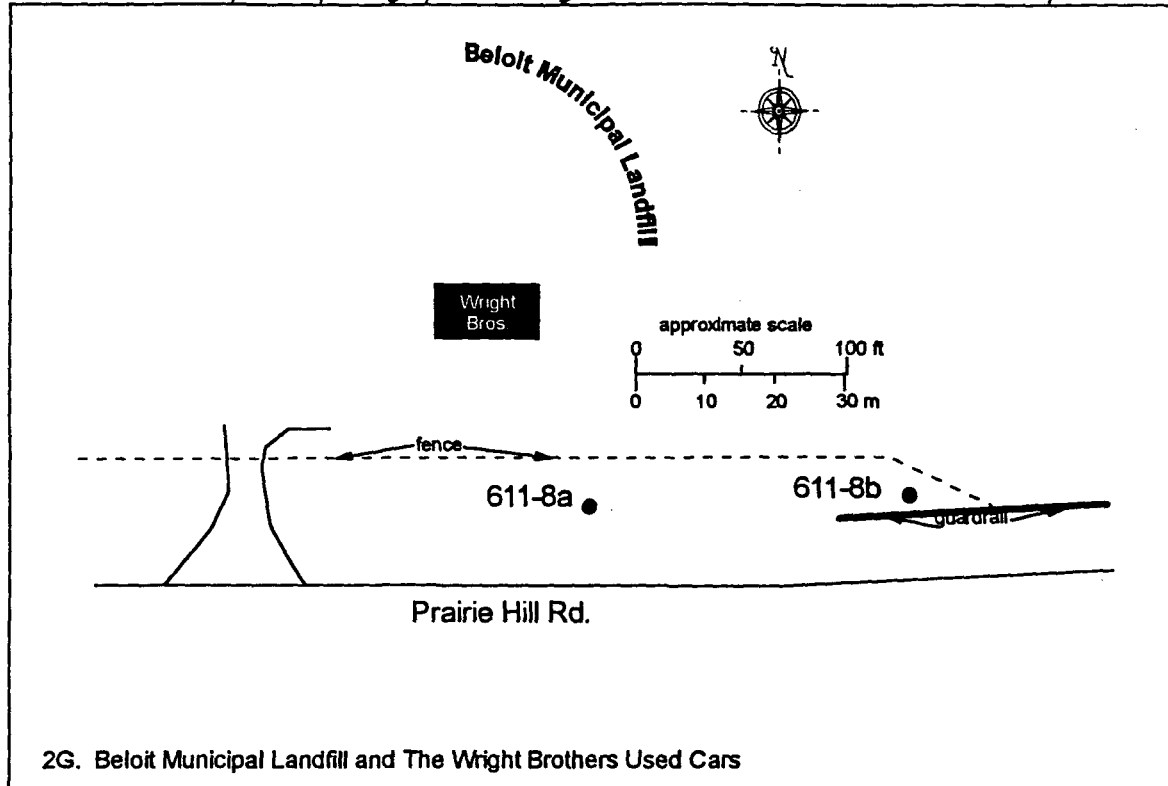


2C. Wisconsin Power and Light Co. electrical substation. Soil sample was collected from center of fence along Prairie Hill Road opposite large transformer

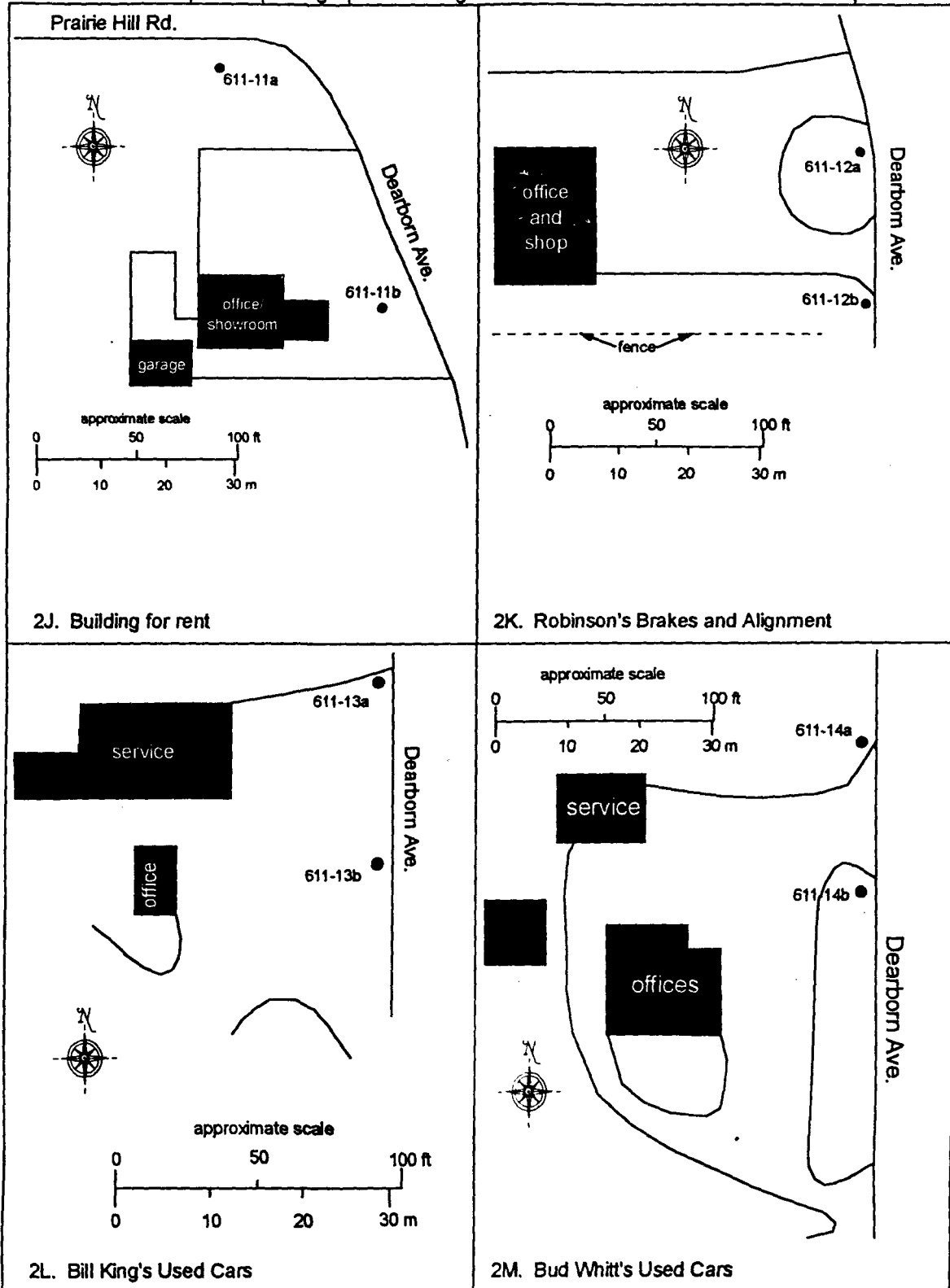
Attachment 2. Maps and photographs showing locations of test holes and surface samples.



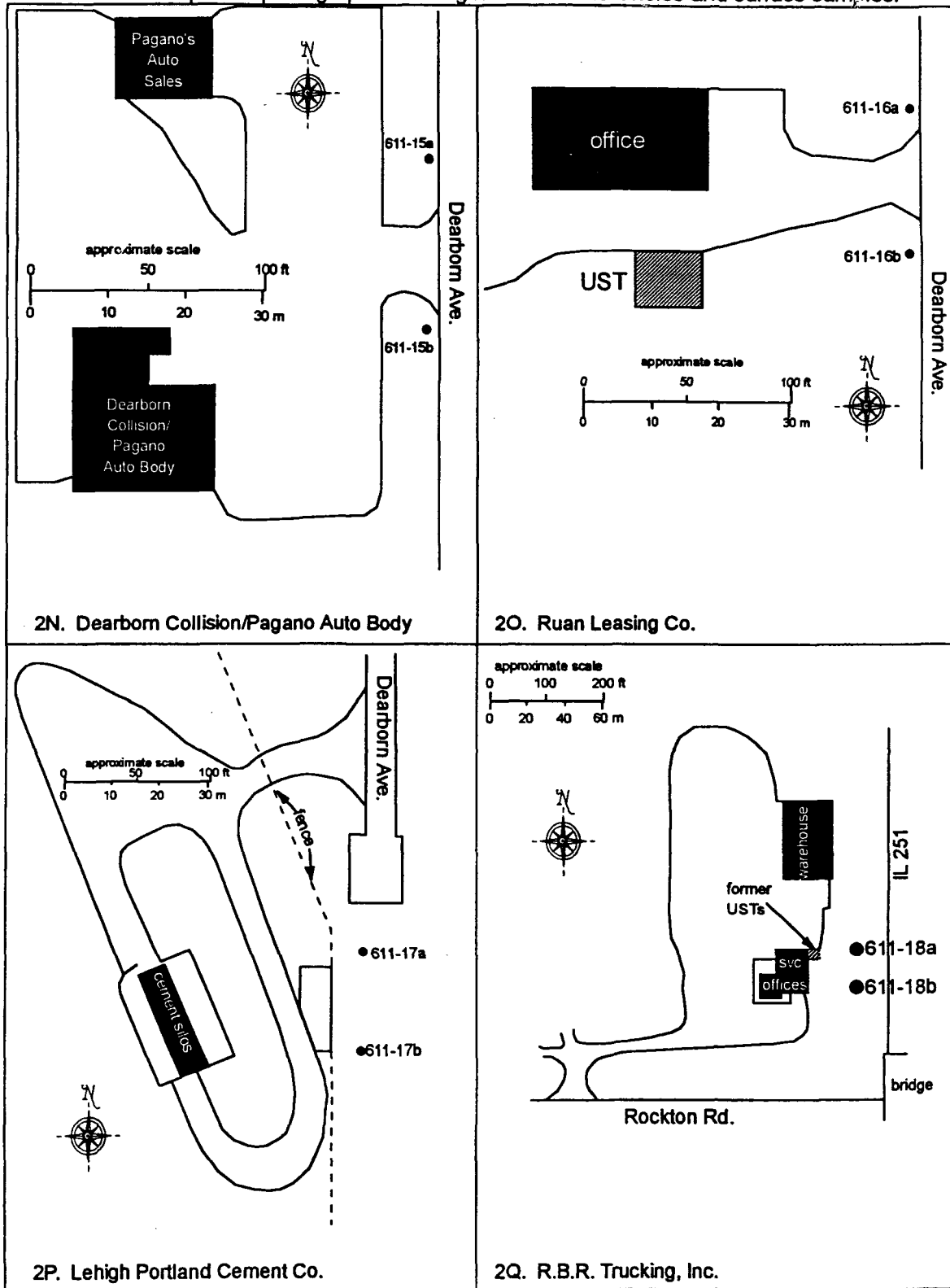
Attachment 2. Maps and photographs showing locations of test holes and surface samples.



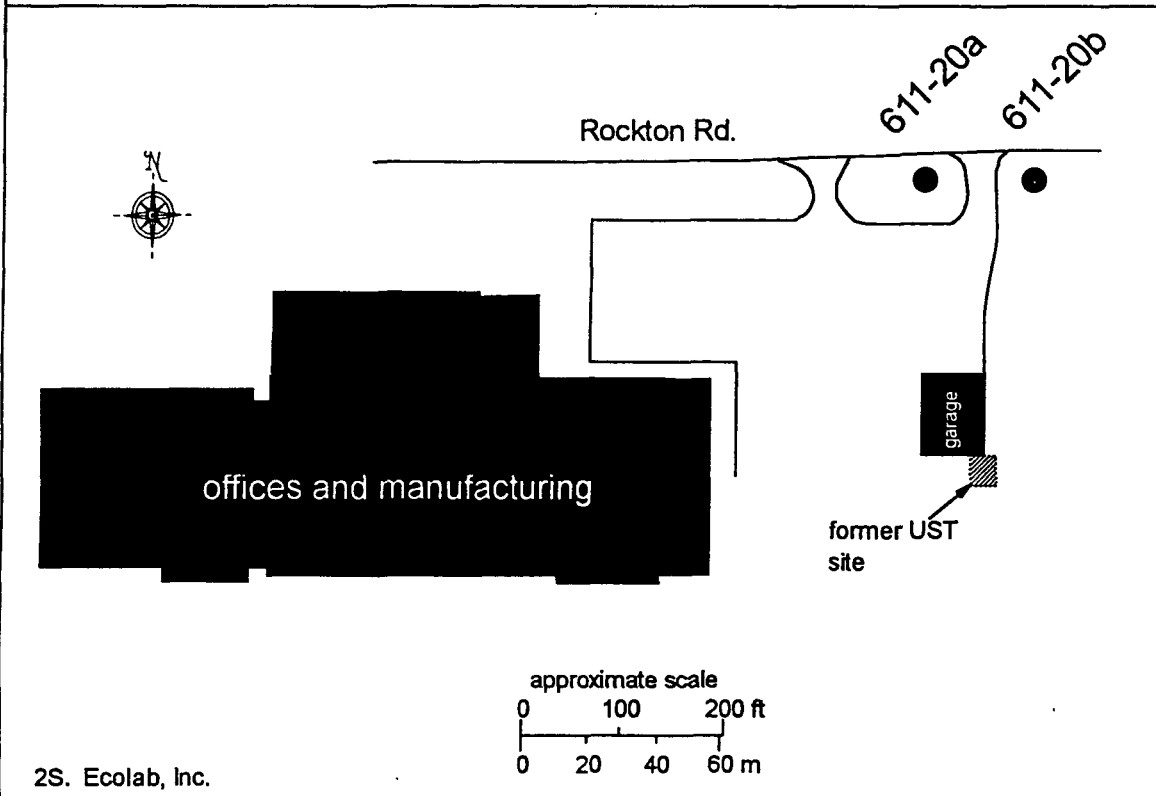
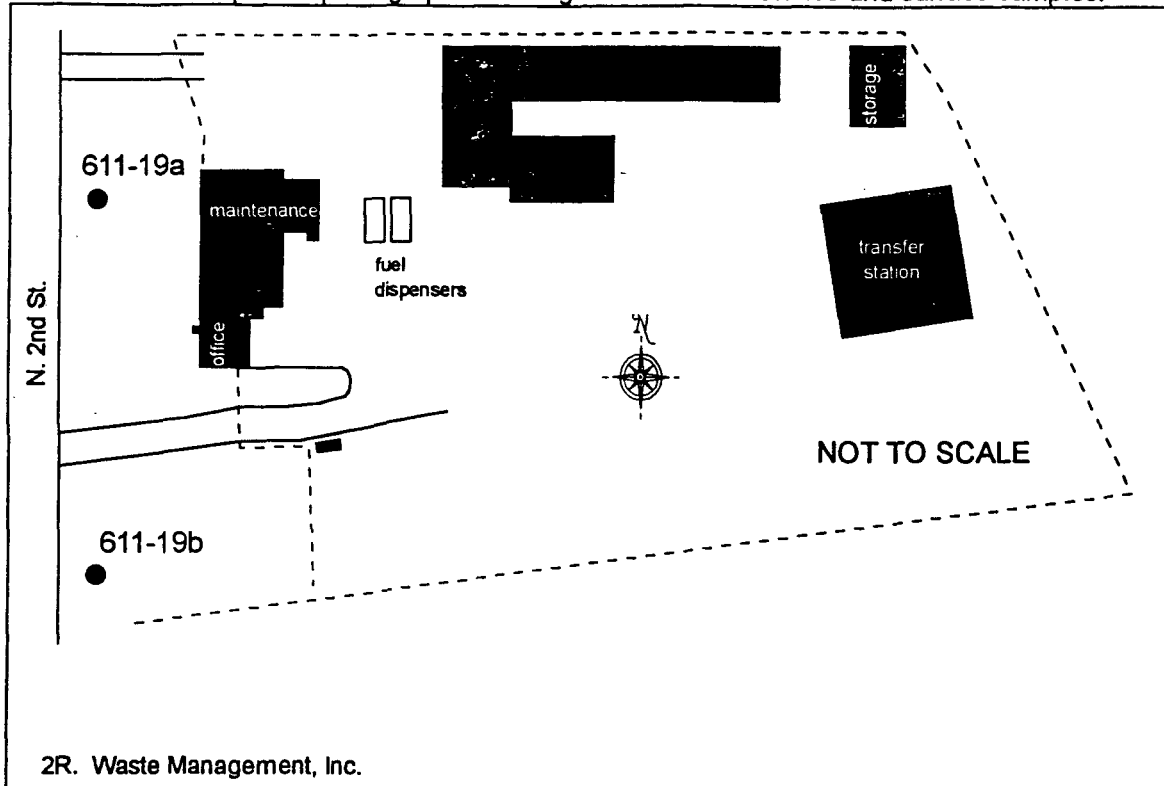
Attachment 2. Maps and photographs showing locations of test holes and surface samples.



Attachment 2. Maps and photographs showing locations of test holes and surface samples.

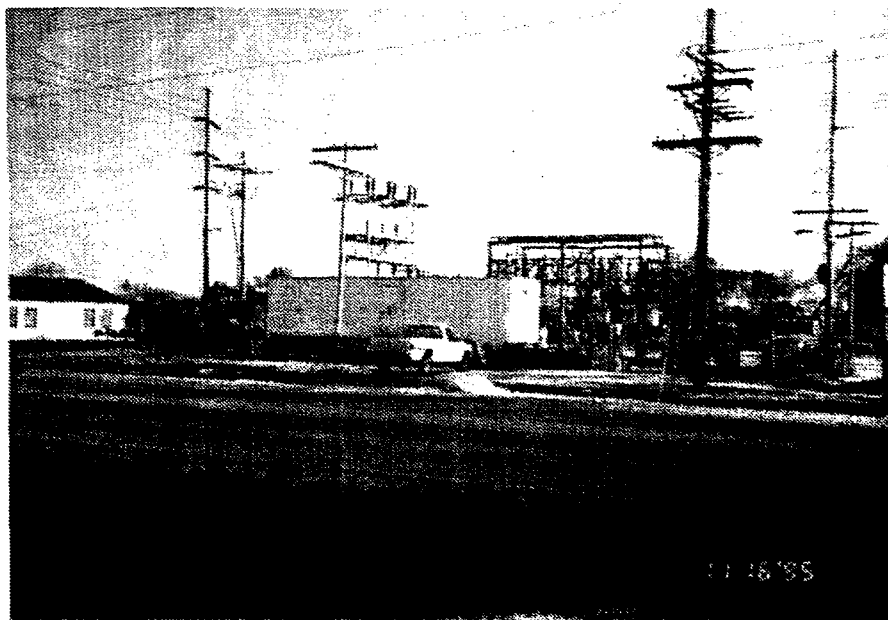


Attachment 2. Maps and photographs showing locations of test holes and surface samples.

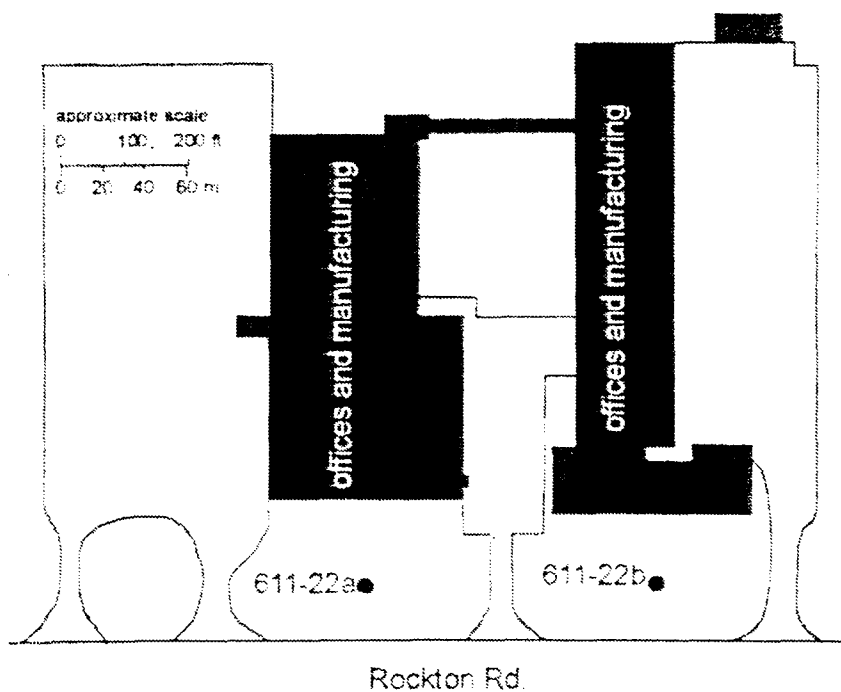




Attachment 2. Maps and photographs showing locations of test holes and surface samples



2T. Wisconsin Power & Light Co., East Rockton substation. Composite soil sample collected from fenceline parallel with Rockton Road (foreground) and from base of utility pole left of center.



2U. Regal-Beloit Corp

### Attachment 3—Results of testing for volatile organic compounds

Borehole # Date Method	Borehole location and information <i>All location distances are from roadway centerlines unless otherwise noted.</i>	Sample depth(s) <sup>1</sup>	Sample type(s)	Analytical results <sup>2</sup> <i>OVA (sm): total VOCs detected with the OVA in survey mode. OVA (gc): tentative identification of VOCs using the OVA in GC mode. PGC: tentative identification of VOCs using the Photovac GC.</i>
611-1a 10/30/96 Geoprobe	Former junkyard (2639 West St. Lawrence Avenue); 37.8 m (124 ft) west of driveway and 10.5 m (34 ft) north of St. Lawrence Avenue.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
611-1b 10/30/96 Geoprobe	—; 5.4 m (18 ft) west of driveway and 8.2 m (27 ft) north of St. Lawrence Avenue.  • final hole depth: 2.7 m (9 ft) • water encountered at a depth of 2.7 m (9 ft)	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
611-2a 10/30/96 Geoprobe	Sand Prairie Auto Parts (1760 Fischer Road); 19.0 m (62 ft) east of driveway at 1834 Fischer Road and 12.7 m (42 ft) south of Fischer Road.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
611-2b 10/30/96 Geoprobe	—; 42.2 m (138 ft) west of driveway and 10.6 m (35 ft) south of Fischer Road.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
611-3a 10/28/96 Geoprobe	Beloit Corp. (1165 Prairie Hill Road); 19.7 m (65 ft) west of Innovation Drive and 12.6 m (41 ft) south of Prairie Hill Road.  • final hole depth: 2.7 m (9 ft) • water encountered at a depth of 2.7 m (9 ft)	0.9 m (3 ft)	soil gas	OVA (sm): 60 ppm OVA(gc): methane
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
611-3b 10/28/96 Geoprobe	—; 23.3 m (76 ft) east of Innovation Drive and 15.7 m (52 ft) south of Prairie Hill Road.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): 10 ppm OVA (gc): methane

### Attachment 3—Results of testing for volatile organic compounds

Borehole # Date Method	Borehole location and information <i>All location distances are from roadway centerlines unless otherwise noted.</i>	Sample depth(s) <sup>1</sup>	Sample type(s)	Analytical results <sup>2</sup> OVA (sm): total VOCs detected with the OVA in survey mode. OVA (gc): tentative identification of VOCs using the OVA in GC mode. PGC: tentative identification of VOCs using the Photovac GC.
611-5a 10/30/96 Geoprobe	Peterson Fruit Co./Hazenga Job Shop/Energy Dynamics, Inc. (2228 Blackhawk Boulevard); 5.6 m (18 ft) west of Blackhawk Boulevard access road and 7.7 m (25 ft) north of southern driveway.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
611-5b 10/30/96 Geoprobe	—; 5.1 m (17 ft) west of Blackhawk Boulevard access road and 21.0 m (69 ft) north of southern driveway.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
611-6a 10/29/96 Geoprobe	United Tool and Engineering Co. (4095 Prairie Hill Road); 8.3 m (27 ft) west of driveway and 11.5 m (38 ft) south of Prairie Hill Road.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): 20 ppm OVA (gc): methane
611-6b 10/29/96 Geoprobe	—; 13.3 m (44 ft) east of driveway and 11.4 m (37 ft) south of Prairie Hill Road.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
611-7a 10/30/96 Geoprobe	Prairie Hill Auto (4513 Prairie Hill Road); 27 m (88 ft) west of driveway and 4 m (12 ft) south of Prairie Hill Road.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): 20 ppm
		2.7 m (9 ft)	soil gas	OVA (sm): 10 ppm OVA (gc): methane
611-7b 10/30/96 Geoprobe	—; 10.1 m (33 ft) east of driveway and 8.1 m (27 ft) south of Prairie Hill Road.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels

### Attachment 3—Results of testing for volatile organic compounds

Borehole # Date Method	Borehole location and information <i>All location distances are from roadway centerlines unless otherwise noted.</i>	Sample depth(s) <sup>1</sup>	Sample type(s)	Analytical results <sup>2</sup> OVA (sm): total VOCs detected with the OVA in survey mode. OVA (gc): tentative identification of VOCs using the OVA in GC mode. PGC: tentative identification of VOCs using the Photovac GC.
611-8a 10/30/96 Geoprobe	Beloit Municipal Landfill (northwest quadrant of Prairie Hill Road and Dearborn Avenue [IL 251]); 46.1 m (151 ft) east of driveway to Wright Brothers Used Cars and 17.5 m (57 ft) north of Prairie Hill Road.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): 50 ppm
				OVA (gc): methane
		1.8 m (6 ft)	soil gas	OVA (sm): 30 ppm
				OVA (gc): methane
		2.7 m (9 ft)	soil gas	OVA (sm): 70 ppm
			soil sample headspace	PGC: no VOCs significantly above background levels
611-8b 10/30/96 Geoprobe	—; 92.4 m (303 ft) east of driveway to Wright Brothers Used Cars and 16.7 m (55 ft) north of Prairie Hill Road.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): 40 ppm
				OVA (gc): methane
		1.8 m (6 ft)	soil gas	OVA (sm): 20 ppm
				OVA (gc): methane
		2.7 m (9 ft)	soil gas	OVA (sm): 40 ppm
				OVA (gc): methane
611-9a 10/30/96 Geoprobe	Jack's Tire Sales and Service (4829 Prairie Hill Road); 16.1 m (53 ft) east of Demeter driveway and 13.8 m (45 ft) south of Prairie Hill Road.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
611-9b 10/30/96 Geoprobe	—; 17.1 m (56 ft) west of east edge building and 16.0 m (52 ft) south of Prairie Hill Road.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels

### Attachment 3—Results of testing for volatile organic compounds

Borehole # Date Method	Borehole location and information <i>All location distances are from roadway centerlines unless otherwise noted.</i>	Sample depth(s) <sup>1</sup>	Sample type(s)	Analytical results <sup>2</sup> <i>OVA (sm): total VOCs detected with the OVA in survey mode. OVA (gc): tentative identification of VOCs using the OVA in GC mode. PGC: tentative identification of VOCs using the Photovac GC.</i>
611-10a 10/30/96 Geoprobe	Erickson Auto Parts and Sales (4917 Prairie Hill Road); 18.0 m (59 ft) west of western side of northern edge of building and 19.2 m (63 ft) south of Prairie Hill Road.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): 60 ppm
				OVA (gc): methane
611-10b 10/30/96 Geoprobe	—; 5.8 m (19 ft) east of east edge of building and 17.1 m (56 ft) south of Prairie Hill Road.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): >100 ppm
				OVA (gc): methane
		1.8 m (6 ft)	soil gas	OVA (sm): 50 ppm
				OVA (gc): methane
611-11a 10/30/96 Geoprobe	Building for rent (14444 Dearborn Avenue); 19.3 m (63 ft) west of Dearborn Avenue access road and 18.0 m (59 ft) south of Prairie Hill Road.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): 30 ppm
				OVA (gc): methane
611-11b 10/30/96 Geoprobe	—; 10.3 m (34 ft) west of Dearborn Avenue access road and 53.3 m (175 ft) south of Prairie Hill Road.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): >100 ppm
				OVA (gc): methane
611-12a 10/30/96 Geoprobe	Robinson's Brakes and Alignment (14440 Dearborn Avenue); 7.1 m (23 ft) west of Dearborn Avenue access road and 11.7 m (38 ft) north of southern driveway.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): 70 ppm
				OVA (gc): methane
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels

### Attachment 3—Results of testing for volatile organic compounds

Borehole # Date Method	Borehole location and information <i>All location distances are from roadway centerlines unless otherwise noted.</i>	Sample depth(s) <sup>1</sup>	Sample type(s)	Analytical results <sup>2</sup> <i>OVA (sm): total VOCs detected with the OVA in survey mode. OVA (gc): tentative identification of VOCs using the OVA in GC mode. PGC: tentative identification of VOCs using the Photovac GC.</i>
611-12b 10/30/96 Geoprobe	—; 6.0 m (20 ft) west of Dearborn Avenue access road and 7.3 m (24 ft) south of southern driveway.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): 20 ppm OVA (gc): methane
		2.7 m (9 ft)	soil gas	OVA (sm): 90 ppm OVA (gc): methane
611-13a 10/31/96 Geoprobe	Bill King's Used Cars (14396 Dearborn Avenue); 7.2 m (24 ft) west of Dearborn Avenue access road and 4.5 m (15 ft) north of north edge building.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): 70 ppm OVA (gc): methane
611-13b 10/31/96 Geoprobe	—; 7.0 m (23 ft) west of Dearborn Avenue access road and 11.8 m (39 ft) south of driveway.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
611-14a 10/30/96 Geoprobe	Bud Whitt's Used Cars (14354 Dearborn Avenue); 7.4 m (24 ft) west of Dearborn Avenue access road and 9.2 m (30 ft) north of driveway.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): 30 ppm OVA (gc): methane
611-14b 10/30/96 Geoprobe	—; 7.7 m (25 ft) west of Dearborn Avenue access road and 9.6 m (31 ft) south of driveway.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): 30 ppm OVA (gc): methane

### Attachment 3—Results of testing for volatile organic compounds

Borehole # Date Method	Borehole location and information <i>All location distances are from roadway centerlines unless otherwise noted.</i>	Sample depth(s) <sup>1</sup>	Sample type(s)	Analytical results <sup>2</sup> <i>OVA (sm): total VOCs detected with the OVA in survey mode. OVA (gc): tentative identification of VOCs using the OVA in GC mode. PGC: tentative identification of VOCs using the Photovac GC.</i>
611-15a 10/31/96 Geoprobe	Dearborn Collision/Pagano Auto Body (14192 Dearborn Avenue); 8.5 m (28 ft) west of Dearborn Avenue access road and 12.5 m (41 ft) north of driveway.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
611-15b 10/31/96 Geoprobe	—; 8.4 m (28 ft) west of Dearborn Avenue access road and 12.5 m (41 ft) south of driveway.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
611-16a 10/31/96 Geoprobe	Ruan Leasing Co. (13850 Dearborn Avenue); 9.2 m (30 ft) west of Dearborn Avenue access road and 9.8 m (32 ft) north of driveway.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
611-16b 10/31/96 Geoprobe	—; 9.0 m (30 ft) west of Dearborn Avenue access road and 9.6 m (31 ft) south of driveway.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
611-17a 10/31/96 Geoprobe	Lehigh Portland Cement Co. (13700 Dearborn Avenue); 5.8 m (19 ft) west of Dearborn Avenue access road (extended) and 6.5 m (21 ft) south of Dearborn Avenue access road pavement.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
611-17b 10/31/96 Geoprobe	—; 7.7 m (25 ft) west of Dearborn Avenue access road (extended) and 31.0 m (102 ft) south of Dearborn Avenue access road pavement.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels

### Attachment 3—Results of testing for volatile organic compounds

Borehole # Date Method	Borehole location and information <i>All location distances are from roadway centerlines unless otherwise noted.</i>	Sample depth(s) <sup>1</sup>	Sample type(s)	Analytical results <sup>2</sup> <i>OVA (sm): total VOCs detected with the OVA in survey mode. OVA (gc): tentative identification of VOCs using the OVA in GC mode. PGC: tentative identification of VOCs using the Photovac GC.</i>
611-18a 10/31/96 Geoprobe	R.B.R. Trucking, Inc. (4950 Rockton Road); 26.5 m (87 ft) east of southern building and 7.4 m (24 ft) north of south edge of southern building.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): 20 ppm
			soil sample headspace	PGC: no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
611-18b 10/31/96 Geoprobe	—; 27.5 m (90 ft) east of southern building and 3.5 m (11 ft) south of north edge of southern building.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): >100 ppm
				OVA (gc): methane
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
611-19a 10/31/96 Geoprobe	Waste Management, Inc. (13125 North 2nd Street); 11.6 m (38 ft) east of 2nd Street and 31.6 m (104 ft) south of northern driveway.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
				OVA (sm): 20 ppm
		2.7 m (9 ft)	soil gas	OVA (gc): methane
				OVA (sm): no VOCs significantly above background levels
611-19b 10/31/96 Geoprobe	—; 11.2 m (37 ft) east of 2nd Street and 45.1 m (148 ft) south of southern driveway.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): 30 ppm
				OVA (gc): methane
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): 40 ppm
				OVA (gc): methane
611-20a 10/29/96 Geoprobe	Ecolab, Inc. (5151 Rockton Road); 22.9 m (75 ft) west of eastern driveway and 20.6 m (68 ft) south of Rockton Road.  • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels



Attachment 3—Results of testing for volatile organic compounds				
Borehole # Date Method	Borehole location and information <i>All location distances are from roadway centerlines unless otherwise noted.</i>	Sample depth(s) <sup>1</sup>	Sample type(s)	Analytical results <sup>2</sup> <i>OVA (sm): total VOCs detected with the OVA in survey mode. OVA (gc): tentative identification of VOCs using the OVA in GC mode. PGC: tentative identification of VOCs using the Photovac GC.</i>
611-20b 10/29/96 Geoprobe	—; 6.1 m (20 ft) east of eastern driveway and 18.7 m (61 ft) south of Rockton Road. • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
611-22a 10/28/96 Geoprobe	Regal-Beloft Corp. (5404 Rockton Road); 35.7 m (117 ft) east of western driveway and 22.3 m (73 ft) north of Rockton Road. • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		2.7 m (9 ft)	soil gas	OVA (sm): 20 ppm OVA (gc): methane
611-22b 10/28/96 Geoprobe	—; 34 m (112 ft) west of eastern driveway and 24 m (79 ft) north of Rockton Road. • final hole depth: 2.7 m (9 ft) • dry hole	0.9 m (3 ft)	soil gas	OVA (sm): no VOCs significantly above background levels
		1.8 m (6 ft)	soil gas	OVA (sm): 10 ppm OVA (gc): methane
		2.7 m (9 ft)	soil gas	OVA (sm): 20 ppm
			soil sample headspace	PGC: no VOCs significantly above background levels

<sup>1</sup> The depth to which the well point was lowered down the borehole to sample the soil gas or the depth at which a water or soil sample was collected from the borehole. Unless otherwise noted, sample depths that are less than the final depth of the borehole are due to water in the hole or hole collapse.

<sup>2</sup> Using the Photovac GC (gas chromatograph), a compound is identified based on its retention time. Because many compounds have similar retention times, this identification is not absolute. Concentrations determined by the Photovac GC are valid only in the range from 1/4 to 3 times the concentration of the standards used to calibrate the instrument; concentrations outside this range are reported as either less than or greater than the valid limits for a compound. Note that these Photovac concentrations reflect only the headspace conditions in the sample vial, and are not representative of the soil or water conditions *in situ*. Concentrations determined by the OVA in survey mode are reported relative to the response generated by the methane standard used to calibrate the instrument. Any concentration in this table greater than 20 ppm has been rounded to the appropriate multiple of 10.



## ENVIRONMENTAL PROTECTION AGENCY • STATE OF ILLINOIS

INSPECTION REPORT - SITE INVENTORY NO. 2010400.5WINNEBAGO CO. L.P.C. Region # 1 Inspector MARQUESROSCUE (Location) KELLEY-SAND & GRAVEL CO. (Responsible Party) Samples Taken: Yes ( ) No (☒)  
Photographs Taken: Yes ( ) No (☒)  
Date 3-19-74 Time 9:45 am Weather 30° CLOUDY Interviewed MIKE KELLEY  
Previous Inspection (NONE) Previous Correspondence (NEW SITE) Site Open: Yes (☒) No ( )

## AUTHORIZATION:

E.P.A. Permit ( )  
Variance ( )  
None (☒)

## TYPE OF OPERATION:

Sanitary Landfill (☒) Storage ( )  
Random Dump ( ) Salvage ( )  
Other \_\_\_\_\_ A.C.D. ( )

## OPERATIONAL STATUS:

Operating ( )  
Temporarily Closed (☒)  
Permanently Closed ( )  
Closed and Covered ( )

## SITE EVALUATION

- ☒ Open Dumping of Garbage ( ) Refuse ( ) Observed  
☒ Openly Dumped Garbage ( ) Refuse (☒) Observed  
☒ Open Burning ( ) Evidence of Recent Open Burning ( ) Observed  
☒ Observed Dumping of Garbage ( ) Refuse ( ) into Standing Water  
☒ Observed Garbage ( ) Refuse ( ) in Standing Water  
☒ Evidence of a Water Pollution Hazard Observed ( )  
☒ Hazardous ( ) Liquid ( ) Waste Accepted at Site  
☒ Leachate Pond or Stream Observed ( ) Leachate Leaving Site ( )  
☒ Blowing Litter Observed ( )  
☒ Observed Evidence of Vectors ( ) Dust Nuisance ( )  
☒ Scavenging Observed ( ) By Operator ( ) By Others ( )  
☒ Salvage Area ( ) Operations ( ) Storage ( ) Unsatisfactory  
☒ Odor Present ( )  
☒ Permit ( ) Board Order ( ) Violation Noted

FOUNDRY SAND

- ☒ Cover Applied to Refuse Daily Yes ( ) No (☒)  
☒ Daily Cover of Adequate Depth Yes ( ) No ( )  
☒ Cover Material of Adequate Quality Yes ( ) No ( )  
☒ Final Cover Applied in Required Areas Yes ( ) No ( )  
☒ Final Cover of Adequate Depth Yes ( ) No ( )  
☒ Intermediate Cover Applied in Required Areas Yes ( ) No ( )  
☒ Intermediate Cover of Adequate Depth Yes ( ) No ( )  
☒ Site Access Restricted Yes ( ) No (☒)  
☒ Spreading and Compacting Adequate Yes ( ) No (☒)  
☒ Site Fencing Adequate Yes ( ) No (☒)  
☒ Site Posted Yes ( ) No (☒)  
☒ Operational ( ) Access ( ) Road(s) Satisfactory Yes (☒) No ( )  
☒ Adequate Shelter ( ) Sanitary Facilities ( ) Provided Yes ( ) No ( )  
☒ Site Policing ( ) Portable Fencing ( ) Provided Yes ( ) No ( )  
☒ Unloading Supervised Yes (☒) No ( )  
☒ Operable Equipment Present on Site Yes (☒) No ( )  
☒ Fire Protection Equipment Provided Yes ( ) No ( )

General Compliance ( ) (FINAL COVER Improvement Needed) Improvement Observed

Signature of operator does not necessarily imply agreement with the above noted observations.

Signature \_\_\_\_\_

Owner/Operator

April 12, 1974

WINNEBAGO COUNTY - Land Pollution Control  
Roscoe/Kelley Sand & Gravel Co.

Mr. John L. Kelley, Manager  
John L. Kelley & Sons Sand & Gravel Co.  
P. O. Box C  
Roscoe, Illinois 61073

Dear Mr. Kelley:

An investigation of an alleged violation of the Environmental Protection Act involving your property located northwest of Roscoe was made on March 19, 1974, by Larry Marques, representing this Agency. Mr. Mike Kelley was contacted at the time of the inspection.

The inspection disclosed that refuse consisting mostly of foundry sand was dumped in your quarry site. This is an apparent violation of the Environmental Protection Act and Chapter 7 of the Illinois Pollution Control Board Rules and Regulations. For your information and reference, copies of these laws are enclosed. Also enclosed are the permit application forms for the development of a disposal site to handle nonputrescible-noncombustible refuse.

The inspection also disclosed that the existing foundry sand and any other refuse will be spread and covered as soon as the frost leaves the ground. Your cooperation in this matter will be appreciated.

In the event that you have any questions regarding this matter, please contact this office.

Very truly yours,

ENVIRONMENTAL PROTECTION AGENCY

*C. E. Clark*  
C. E. Clark, Manager  
Surveillance Section  
Division of Land Pollution Control

LSM:csc  
cc: Region I



## ENVIRONMENTAL PROTECTION AGENCY • STATE OF ILLINOIS

INSPECTION REPORT - SITE INVENTORY NO. 20104005WINNEBAGO

CO. - L.P.C.

Region # 1Inspector KrutzROSCOF

(Location)

1 KELLEY S & G

(Responsible Party)

Samples Taken: Yes ( ) No ☒Photographs Taken: Yes ( ) No ☒Date 4-23-74 Time 12:15Weather PC 40°Interviewed BY phonePrevious Inspection 3-19-74Previous Correspondence 4-12-74 Site Open: Yes ( ) No ☒

## AUTHORIZATION:

E.P.A. Permit ( )

Variance ( )

None ☒

## TYPE OF OPERATION:

Sanitary Landfill ☒ Storage ( )

Random Dump ( ) Salvage ( )

Other \_\_\_\_\_ A.C.D. ( )

## OPERATIONAL STATUS:

Operating ( )

Temporarily Closed ☒

Permanently Closed ( )

Closed and Covered ( )

## SITE EVALUATION

- ☒ Open Dumping of Garbage ( ) Refuse ( ) Observed  
Openly Dumped Garbage ( ) Refuse ☒ Observed  
Open Burning ( ) Evidence of Recent Open Burning ( ) Observed  
Observed Dumping of Garbage ( ) Refuse ( ) into Standing Water  
Observed Garbage ( ) Refuse ( ) in Standing Water  
Evidence of a Water Pollution Hazard Observed ( )  
Hazardous ( ) Liquid ( ) Waste Accepted at Site  
Leachate Pond or Stream Observed ( ) Leachate Leaving Site ( )  
Blowing Litter Observed ( )  
Observed Evidence of Vectors ( ) Dust Nuisance ( )  
Scavenging Observed ( ) By Operator ( ) By Others ( )  
Salvage Area ( ) Operations ( ) Storage ( ) Unsatisfactory  
Odor Present ( )  
Permit ( ) Board Order ( ) Violation Noted

FOYNDAY SAND

- Cover Applied to Refuse Daily Yes ( ) No ☒  
Daily Cover of Adequate Depth Yes ( ) No ☒  
Cover Material of Adequate Quality Yes ( ) No ☒  
Final Cover Applied in Required Areas Yes ( ) No ☒  
Final Cover of Adequate Depth Yes ( ) No ☒  
Intermediate Cover Applied in Required Areas Yes ( ) No ☒  
Intermediate Cover of Adequate Depth Yes ( ) No ☒  
Site Access Restricted Yes ☒ No ( )  
Grading and Compacting Adequate Yes ☒ No ( )  
Site Fencing Adequate Yes ☒ No ( )  
Site Posted Yes ☒ No ( )  
Operational ( ) Access ( ) Road(s) Satisfactory Yes ☒ No ( )  
Adequate Shelter ( ) Sanitary Facilities ( ) Provided Yes ☒ No ( )  
Site Policing ( ) Portable Fencing ( ) Provided Yes ☒ No ( )  
Unloading Supervised Yes ☒ No ( )  
Operable Equipment Present on Site Yes ☒ No ( )  
Fire Protection Equipment Provided Yes ☒ No ( )

General Compliance ( ) \_\_\_\_\_ Improvement Needed \_\_\_\_\_ Improvement Observed

Signature of operator does not necessarily imply agreement with the above noted observations.

Signature \_\_\_\_\_  
Owner/Operator

May 13, 1974

IN REPLY REFER TO: 20104005  
WINNEBAGO COUNTY - Land Pollution Control  
Roscoe/Kelley Sand & Gravel

John C. Kelley Sand & Gravel  
Post Office Box C  
Roscoe, Illinois 61073

Attn: Mr. Kelley

Dear Mr. Kelley:

Your refuse disposal facility located northwest of Roscoe was inspected on April 23, 1974, by Art Kraft, representing this Agency.

The inspection disclosed the following conditions which may constitute violations of the Illinois Environmental Protection Act and Chapter 7, of the Illinois Pollution Control Board Rules and Regulations on Solid Waste:

Refuse was not being satisfactorily covered. All refuse should be covered daily with a minimum of six (6) inches of compacted cover material.

Intermediate covering was not satisfactory. At the end of each day of operation, in all but the final lift of a sanitary landfill, a compacted layer of at least twelve (12) inches of suitable material shall be placed on all surfaces of the landfill where no additional refuse will be deposited within 60 days.

The finished areas of your landfill have not received satisfactory final cover. Final cover, consisting of a minimum of two (2) feet of cover material, should be applied to all completed areas of the fill. The cover should be graded to provide surface drainage and prevent ponding. Final seeding is recommended for erosion control.

John C. Kelley Sand & Gravel  
Page -2-  
May 13, 1974

A refuse disposal site was being operated without a valid permit from this Agency, in apparent violation of the Environmental Protection Act and Chapter 7, of the Illinois Pollution Control Board Rules and Regulations. It is requested that the disposal of refuse be discontinued until such time as a permit is obtained from this Agency.

We request that you correct the aforementioned violations immediately. An acknowledgement of this letter is requested indicating the corrective action which you have taken or plan to take. Your degree of compliance will determine our next course of action.

Very truly yours,

ENVIRONMENTAL PROTECTION AGENCY



C. E. Clark, Manager  
Surveillance Section  
Division of Land Pollution Control

AK:mc  
cc I

